United States Court of Appeals
for the
District of Columbia Circuit

TRANSCRIPT OF RECORD

BRIEF FOR APPELLANTS AND JOINT APPENDIX

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Appeal No. 11302

United States Court of Appeals
For the
District of Columbia Circuit
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SAMUEL N. LEBOLD AND MORRIS PAPER MILLS, APPELLANTS,

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, APPELLEE.

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

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QUESTION PRESENTED

The question presented is whether the District Court properly refused to authorize the reissue of a patent on a paperboard bottle holder embodying a novel low handle construction giving unexpected and unforeseen advantages, the claims of the reissue being more definite and restricted in order that Appellants may avoid claiming more than they had a right to claim and to avoid any question of anticipation by a patent to Lyons which is presumed originally to have been considered by the Patent Office although not cited, the disclosure of which Lyons patent contradicts Appellants' basic concept, the physical embodiment of which, on account of its innovation, has been commercially adopted in preference to previous carriers including the carrier of the Lyons Patent and of other prior art cited.

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JURISDICTIONAL STATEMENT

Appellant Lebold, with the assent of his Assignee, Appellant Morris Paper Mills, filed an application, S. N. 139,141, on January 18, 1950 for reissue, with more definite and restricted claims, of his Patent 2,460,229 issued January 25, 1949.

In an action dated April 3, 1950, the Primary Examiner finally rejected all of the claims of the reissue application upon two patents from the prior art. The Board of Appeals of the Patent Office, in an opinion dated July 11, 1950, affirmed the decision of the Examiner.

Thereupon, on August 11, 1950, a civil action against the Commissioner of Patents was filed in the District Court for the District of Columbia under R. S. 4915, 35 U. S. C. 63, seeking a decree authorizing the Commissioner to reissue Patent No. 2,460,229 with the more definite and restricted claims identified in the complaint.

In an opinion from the bench immediately following the trial on October 22, 1951, the District Court, Holtzoff, J., decided for the Commissioner of Patents, judgment being entered November 16, 1951.

Notice of Appeal from the decision of the District Court was filed on December 27, 1951.

STATEMENT OF THE CASE

On December 11, 1944, Appellant Samuel N. Lebold filed application S. N. 567,560 for a patent on a "Bottle Holder", and filed a continuation application September 27, 1947, S. N. 776,553. This latter application was subsequently assigned to the Appellant Morris Paper Mills Company of Chicago, Illinois, and matured into Patent 2,460,229 on January 25, 1949.

The invention is a low handle Bottle Holder or carrier carton for bottles containing soft drinks, such as Coca-Cola and the like, frequently purchased from the neighborhood grocer. This low handle Bottle Holder or carrier carton is manufactured from paperboard or cardboard and includes bottom, side and end walls, and an upright longitudinally extending central panel, with transverse panels providing independent cells or compartments, usually six in number, one for each bottle. The central panel, with a slot for the fingers in its upper portion, is taller than the side and end panels, but not as tall as the bottles for which the device is designed.

Following issuance of the original patent, Appellants became aware of the disclosure of an earlier patent to Lyons, No. 2,296,937, for a high handle bottle holder or carrier that is distinctly different from the low handle bottle carrier of the patent here sought to be reissued. The Lyons patent had not been cited by the Patent Office. It provides imperfectly for one, but only one, advantage (stacking) that Appellants' construction achieves to perfection. Nevertheless, Appellants concluded that it was desirable to have more definite and restricted claims than those of the original Lebold patent, hence the application for reissue. The patent to Lyons discloses a high handle carrier for six bottles of a generally similar beverage but its centrally disposed longitudinal panel is hinged, or flexibly, instead of rigidly attached, to the side walls of the carton in such a manner that the panel is vertically movable. The top of this panel is well above the tops of the bottles when a load is being carried, but when the carrier is placed on a supporting surface and this panel is released, the flexibility of the structure permits it to be pushed downwardly until its top is flush with or slightly below the plane of the tops of the bottles. There is no suggestion of a construction like Appellants' in which the handle panel is rigidly, immovably set permanently below the bottle tops. In fact, in the disclosure of the Lyons patent, there is described in detail the special movable construction which places the top of the handle in exactly the opposite position from that for which Appellants provide while the holder is being carried, namely, the Lyons panel projects above the bottle tops.

The Board of Appeals of the Patent Office affirmed the decision of the Examiner in refusing to allow the narrower, more definite claims of the reissue application, holding that a construction, in which the top of the center panel is not above the tops of the bottles in the holder while the carton is being carried, did not constitute an inventive step in view of the disclosure of Lyons.

Upon the trial of the case in the District Court, the file wrappers of both the original patent and the application for reissue, with copies of the references relied upon by the Patent Office in rejecting the reissue application, were introduced in evidence, as were numerous cartons constructed in accordance with the disclosure of the reissue application and the reference patents. The Court, instead of permitting Appellants to demonstrate that the carrier of the reissue application was stronger, safer and easier to carry than all prior art carriers, even though made of less paperboard of lesser thickness, and to demonstrate why, aside from savings in material, Appellants' carrier effected important savings in transportation costs, resulting in its general adoption and supplanting of prior art carriers, admitted part of what Appellants sought to prove by such demonstrations, namely, that the Lebold carton was a commercially accepted improvement. The Court did, however, admit in evidence, without permission of explanation, the device which Appellants sought to use for the proposed demonstrations.

The inventor, Lebold, testified that his structure, although using substantially less material, of less thickness, than prior paperboard bottle carriers, is much stronger than any of the prior art devices and he explained why this is so. The reason is that in the low handle construction the tendency, common with high handle carriers, for the handle portion to bend and thus to weaken and become torn, is practically eliminated. In Appellants' structure the top of the central panel is rigidly fixed and it does not extend above the plane of the bottles. This insures that the hand carrying the carton will engage the neck of a central bottle and not exert leverage on the handle panel which is the case with high handle carriers where the knuckles rest on the tops of the bottles. Substantial evidence was introduced to prove, and the Court acknowledged as a fact, that the invention of Appellants' patent met with immediate and widespread commercial success throughout the industry including its adoption by the owner of the Lyons patent.

The Court found as a fact that the step actually taken by Lebold was to transform the handle of the structure disclosed in the Lyons patent from a handle that goes up and down to a handle that is fixed permanently in the low or below the bottle top position. It also found as a fact that this low handle construction is an improvement over and is superior to a high handle structure and, further, that the Lebold carrier has come into common use. It was held, notwithstanding these facts, that the step taken by the Appellant Lebold was not inventive in view of the prior art, and that the reissue containing the modified claims should not be granted.

STATUTES INVOLVED

35 U. S. C. 31 (R. S. Sec. 4886; March 3, 1897 ch. 391, Sec. 1, 29 Stat. 692; May 23, 1930, ch. 312, Sec. 1, 46 Stat. 376; August 5, 1939, ch. 450, Sec. 1, 53 Stat. 1212).

Any person who has invented or discovered any new and useful art, machine, manufacture, * * * or any new and useful improvements thereof, * * * not known or used by others in this country, before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than one year prior to his application, * * * may, upon payment of the fee required by law, and other due proceeding had, obtain a patent therefor.

35 U. S. C. 64 (R. S. Sec. 4916; May 24, 1928, ch. 730, 45 Stat. 732).

Whenever any patent is wholly or partly inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the commissioner shall, * * * cause a patent for the same invention, and in accordance with the corrected specification, to be reissued to the patentee or to his assigns * * * for the unexpired part of the term of the original patent. * * * The specifications and claims in every such case shall be subject to revision and restriction in the same manner as original applications are.

35 U. S. C. 63 (R. S. Sec. 4915; February 9, 1893, ch. 74, Sec. 9, 27 Stat. 436; March 2, 1927, ch. 273, Sec. 11, 44 Stat. 1336; March 2, 1929, ch. 488, Sec. 2 (b), 45 Stat. 1476; August 5, 1939, ch. 451, Sec. 4, 53 Stat. 1212).

Whenever a patent on application is refused by the Board of Appeals or whenever any applicant is dissatisfied with the decision of the Board of Interference Examiners, the applicant * * * may have remedy by bill in equity, if filed within six months after such refusal or decision; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to the law, to receive a patent for his invention, as specified in his claim or for any part thereof, as the facts in the case may appear. And such adjudication, if it be in favor of the right of the applicant, shall authorize the commissioner to issue such patent on the applicant filing in the Patent Office a copy of the adjudication and otherwise complying with the requirements of law.

STATEMENT OF POINTS

1. Appellants are entitled to a reissue of their patent because they seek to remedy the inadvertent mistake of failing to make the claims of the original patent as definite and restricted as they should be in view of a prior patent not cited, although presumed to have been considered by the Patent Office in the granting of the original patent.

2. The District Court wrongfully refused to authorize reissue of Appellants' patent in view of the Lyons patent despite the proven fact that by the improvements disclosed in their original patent, which were the result of a step diametrically opposed to the teachings of the prior art, including Lyons, Appellants achieved valuable, unobvious and unexpected results which led to immediate commercial adoption of Appellants' invention.

3. Where the prior art went to great lengths to provide a high handle for carriers, which was thought to be neces-

sary and desirable, and provided extra special means to produce one of the advantages resulting without extra or special means from use of the low handle type of carrier, it was an act of invention to discover and adopt the low handle construction which not only produced said one advantage but many other unobvious and unexpected advantages and superiorities, and the refusal to grant Appellants a reissue patent on the grounds of lack of invention was in error.

4. When a reissue patent is sought, particularly with claims more definite and restricted than those of the original patent, the Patent Office should not reverse its original decision that the idea was patentable, because of a reference presumed to have been considered during the examination of the original application although not cited, except for the strongest of reasons, and particularly it should not reverse itself in this case where the newly cited patent discloses special means that represent merely a step in the direction taken by the prior art and where the invention disclosed in the original and reissue patent eliminates all such means and represents a radical departure from the prior art; and the District Court should scrutinize such a reversal with great care.

5. The District Court failed, as did the Patent Office, to give effect to the many holdings of the Supreme Court that a change in structure which is exactly contrary to the teachings of the prior art and thought by that art to be undesirable and which results in totally unobvious and unexpected advantages that cause the improved structure to be widely accepted commercially, constitutes a patentable invention.

SUMMARY OF ARGUMENT

1. Appellants would be entitled to a reissue in the absence of the new reference.

2. The added reference shows that Appellants took a step contrary to all teachings of the prior art.

3. Appellants' construction, the result of a step exactly opposite to the teachings of the prior art, brought about such completely unobvious and unexpected results that it constitutes invention.

4. Any doubts as to whether Appellants' improvements constitute invention are resolved by the immediate and widespread commercial adoption of Appellants' structure.

5. The District Court failed to comprehend the nature and magnitude of the inventor's improvement.

ARGUMENT

The reissue of patents, a practice sanctioned in the early Supreme Court case of *Grant v. Raymond,* 6 Peters (31 U. S.) 218, 243, is a proceeding by which errors, such as incomplete specifications or claims of indefinite or broader scope than those to which the patentee is entitled, are corrected. The reissued patent then continues in effect for the unexpired term of the original patent.

To justify the reissue of a patent under the statute, the errors or defects in the original patent must have arisen by inadvertence, accident or mistake and without any fraudulent or deceptive intent, 35 U. S. C. 64, *Parker & Whipple Co. v. Yale Lock Company,* 123 U. S. 87, 103; *In re Hoiland,* 270 Fed. 704 (App. D. C., 1921), although the fault may lie with either the patentee or the Commissioner of Patents, *Grant v. Raymond, supra.*

The provision of the reissue statute, 35 U. S. C. 64, quoted above, which states that the specification and claims in reissue cases shall be subject to revision and restriction in the same manner as original applications, has given rise to the controversy presently before this Court.

1. APPELLANTS WOULD BE ENTITLED TO A REISSUE IN THE ABSENCE OF ANY ADDITIONAL ART.

Upon the facts Appellants are clearly entitled to a reissue patent. As stated in the oath filed with the application for the reissue (Plaintiff's Ex. 2, p. 31), the attention of Appellants' attorneys was directed to a prior art patent to Lyons, No. 2,296,937, September 29, 1942, only after Appellants' original patent issued. The Lyons patent was overlooked by Appellants' attorneys during the prosecution of the original patent, since it was not cited by the Patent Office although presumed to have been considered as a reference against the original application. It was felt that in view of Lyons, to avoid any possibility of misinterpretation or question of anticipation, the claims of Appellants' patent should be made more specific. The claims were accordingly redrawn so as to make them more definite and limited (Appendix P. 22). The application for the reissue was filed, and the reference pointed out to the Patent Office.

The inadvertence or mistake is manifest. Although the responsibility for the failure to cite the reference cannot be fixed, this is not necessary, *Grant v. Raymond, supra.*

The absence of any fraudulent intent on the part of the Appellants is clearly evident. They pointed out, through their attorneys, the mistake which had been committed.

Indeed, Appellants have been placed in their present position as a result of their own honesty. They have already been granted a patent on the improved form of bottle carrier, and there is no question that, at one time, the Patent Office thought the improvement was invention. However, Appellants, having discovered the Lyons reference which was not made of record by the Patent Office, voluntarily came forward citing the reference and filed application for reissue with more definite and restricted claims which additionally distinguished over Lyons. Appellants, rather than attempting to increase their protection by the reissue, are voluntarily reducing or limiting the scope of their monopoly to that to which they believe themselves actually entitled. Nor are they attempting to extend the duration of their patent, since the reissue expires at the same time as the original would have expired. Equally important to Appellants is that they make sure there is no question of their patent being held invalid because it claims what might be said to be disclosed by Lyons, the possibility of such a holding having been brought about by the failure of the Patent Office to cite the Lyons patent.

Notwithstanding all this, the reissue to Appellants has been refused on the ground of no invention in view of the prior art including the Lyons reference.

This is a complete reversal of the previous position of the Board of Appeals during prosecution of the original Lebold patent application where, upon an appeal from the Examiner's action rejecting the claims, the Board, in finding invention, held that the combination of references relied upon by the Examiner in rejecting the original claims would not result in the structure of those claims:

> "* * * because this arrangement not only results in permitting the stacking of packages in their paperboard containers without bending the panel *but causes the formation of a more secure and rigid package* * * *" (Emphasis added) (Plaintiff's Exhibit 1, p. 138)

In the reissue application, the Board, in departing from its previous opinion, merely stated that there was no invention in utilizing the expedient of the movable handle in Lyons flexible structure in any carrier with a central panel serving as a handle. (Appendix, pp. 18, 19.)

As will be discussed in the succeeding portion of this brief, the structure of the Lyons patent is very flexible and therefore weak and unsatisfactory for the purpose intended. The Board of Appeals recognized in their opinion in the initial application that Appellants by their improvement had provided a rigid and secure structure as well as making vertical stacking possible. On the appeal in the reissue application, basing its opinion primarily on a reference directed to a high handle and a flexible structure, the Board held that there was no invention in providing a low handle in the same rigid and secure carrier.

Appellants contend that such a reversal of opinion should be very carefully reviewed, and unless it appears to be warranted by more substantial grounds than the wholly inadequate reference here relied upon, should not be upheld.

The District Court, apparently conceding that the reissue would otherwise be proper, held that there was no invention in view of the new reference and dismissed the complaint. (Appendix, pp. 20, 21.) Insufficient consideration was given to the reversal of position of the Board of Appeals, which first held that Appellants' provision of a rigid and secure container was invention, but later held upon an application for reissue, that the same structure was not invention. Nor was consideration given to the fact that, in the light of the new reference, Appellants' step is highlighted as being the elimination of all extra means to accomplish the one objective of vertical, columnar stacking in a minimum of space, while at the same time achieving additional results not possible with any prior art construction without modification. Appellants' added results were completely unobvious and unexpected and led to immediate acceptance of Appellants' invention throughout the industry.

Thus, the Lyons patent, voluntarily made of record and contrary to Appellants' inventive concept, has caused reversal of the decision upon patentability. Appellants' right to a reissue having been clearly established except for the added reference, the question resolves itself into whether Appellants' step, in the light of its unobviousness and totally unexpected yet highly successful additional results, represents invention.

2. THE ADDED REFERENCE DISCLOSES THAT APPELLANTS TOOK A STEP CONTRARY TO ALL TEACHINGS OF THE PRIOR ART.

The prior art relied on by Appellee not only fails to show Appellants' structure, but it emphasizes that the step taken by Appellants is diametrically opposed to everything disclosed or suggested.

The patent to Himes, No. 2,273,266 of February 17, 1942 (Appendix, opposite p. 14), discloses the broad idea of separating the bottle carrying compartments by cross pieces or cross braces between the side walls and central panel. Himes shows a high handle carrier and provides the extra means featured by Slevin 2,322,396, Fig. 3 (Plaintiff's Exhibit 8) to permit vertical stacking, namely, bending over the protruding top of the handle panel along the dotted line at 45a of Fig. 1, to rest upon the tops of the bottles. There is no suggestion in Himes of any structure in which the carrying handle is rigidly and permanently fixed below the tops of the bottles.

The patent to Lyons, No. 2,296,937 of September 29, 1942 (Appendix, opposite p. 14) discloses in the embodiment of Figs. 7, 8 and 9, relied upon by Appellee, a collapsible bottle carrier having a conventional bottom 35-36 and side walls 32 but having an upright central panel 34 with an oval aperture 51 cut out of the upper end to form a handle, which panel is separated from the bottom of the carrier. Sections 33 extending from a point near the lower end of the central panel to the tops of the side walls, hingedly connect the central panel to the side walls. This permits the central panel to be raised and lowered. Movability of this panel is an extra means provided, in Figs. 7, 8 and 9 to permit vertical stacking. Bending along a score line weakens any paperboard article.

The dimensions of the Lyons central panel are such that in the lowered position with its bottom edge resting on the bottom of the carton, as shown in Figs. 8 and 9, the aperture which forms an opening for the fingers in the upper portion is below the plane of the tops of the bottles in the carrier. When the panel is raised, the aperture is moved upwardly so that the knuckles of the carrying hand, after scraping against the bottle cap flanges, are above the tops of the bottles. This is shown by Exhibit 12.

The purpose of the Lyons construction is readily apparent. When the carton is at rest on a supporting surface and the central panel is pushed down until the upper edge is below the tops of the bottles, another carton may be stacked directly on the bottles of the first carton.

However, when the carton is lifted by means of the handle on the central panel, the portions hingedly connecting the panel to the side walls permit the handle to be raised until the opening for the fingers is above the tops of the bottles in the carton. The structure is such that the carton cannot be carried by the handle without the handle panel being raised.

Clearly, Lyons thought it necessary to have the handle project above the tops of the bottles for carrying the carton by the handle. Otherwise, no purpose would have been served by the special structure permitting the movable handle. He was obviously bound by the thought prevalent in the art at that time that a high handle was necessary. Although perceiving the advantage of having the handle lowered to permit stacking of the cartons, he had no conception of the advantages to be obtained by Appellants' idea of solidly fastening the handle in the lowered position permanently, and he took special steps to avoid what he believed to be an undesirable result.

It is clear, therefore, that the Lyons patent, far from showing that the step taken by Appellants of constructing the carrier so that the handle panel is permanently and rigidly in a position in which it does not at any time project above the tops of the bottles in the carrier was obvious, shows that it was not obvious. Rejection of Appellants' claims on Himes in view of Lyons, or Lyons in view of Himes, requires a reconstruction of both Himes and Lyons and represents an unwarranted adaptation of a part only of one for the reconstruction of the other. This is not permissible because it is clear that Lyons and others of the prior art believed it desirable and even necessary to have the handle in a high, free position for carrying the carton. In other words, nothing in the art suggests that the handle be placed in the low position for carrying the carton. In fact, the art suggests that this is undesirable and unworkable.

3. APPELLANTS' CONSTRUCTION, THE RESULT OF A STEP EXACTLY OPPOSITE TO THE TEACHINGS OF THE PRIOR ART, BROUGHT ABOUT SUCH COMPLETELY UNOBVIOUS AND UNEXPECTED RESULTS THAT IT CONSTITUTES INVENTION.

Appellants, exercising the inventive faculty, proceeded in a direction exactly opposite to anything done before, and constructed a carrier in which the handle was rigidly and permanently fixed below the tops of the bottles in the carrier. The results were completely unexpected and the advantages of the improvement were so pronounced that the carrier was immediately and widely adopted by the soft drink industry.

The Supreme Court has repeatedly held that an improvement which is the result of a step in a direction contrary to the teachings of the art and which produces unobvious and unexpected results is the subject of a valid patent, especially when the improvement achieves widespread and immediate commercial success.

A leading case, and one which Appellants submit is directly in point, is *Eibel Process Company v. Minnesota & Ontario Paper Company,* 261 U. S. 45. The patentee there had substantially raised the pitch of a stock carrying wire on a paper making machine to bring the speed of the stock up to that of the wire, thereby eliminating a constant source of trouble and enabling the machines to be speeded up to a large degree. The prior art patent relied upon showed a wire with only a slight pitch the purpose of which was to drain the liquid in the stock in the direction of the pitch. The Court stated that it was clear that the objective of the patentee was entirely different from that of the prior art, and taking into account the immediate commercial acceptance of the improvement, said:

> "We can not agree with the Circuit Court of Appeals that the causal connection between the unequal speeds of the stock and the wire, the disturbance and rippling of the stock, and between the latter and the defective quality of the paper in high speeds of the machine was so obvious that perception of it did not involve discovery which will support a patent. The fact that in a decade of an eager quest for higher speeds this important chain of circumstances had escaped observation, the fact that no one had applied a remedy for the

> consequent trouble until Eibel, and the final fact that when he made known his discovery, all adopted his remedy, leave no doubt in our minds that *what he saw and did was not obvious* and did involve discovery and invention." (Emphasis added).

To the same effect is *Goodyear Tire & Rubber Co., Inc. v. Ray-O-Vac Co.*, 321 U. S. 275, in which a patent on a covering for a dry cell battery which prevented deformation and leakage was held valid on the grounds that there was invention in providing a solution to a long existing problem by unobvious means not shown in the prior art, which solution met with immediate commercial success without any extensive advertising.

Strongly reinforcing Appellants' position is the opinion in the case of *Minerals Separation, Ltd. v. Hyde,* 242 U. S. 261. The patentee had discovered that in an ore separating process reducing the amount of oil mixed with finely powdered low grade metal ore to a fraction of a percent by weight, as compared with twenty-five to seventy-five percent by weight used before, contrary to all expectations, resulted in a vastly increased yield of ore. Holding that the prior art, though showing the use of oil in the process, disclosed a fundamentally different concept of the use of that oil, the Court stated:

> "It is not necessary for us to go into a detailed examination of the process in suit to distinguish it from the processes of the patents relied on as anticipations, convinced as we are that the small amount of oil used makes it clear * * * that this advance on the prior art and the resulting froth concentrate so different from the product of other processes make of it a patentable discovery as new and original as it has proved useful and economical."

Finding that the world wide commercial acceptance of the new process, without puffing or extensive business exploitation constituted, of itself, persuasive evidence of invention, the Court unhesitatingly held the patent valid.

Appellants, like the patentees in the Eibel and Minerals Separation cases, by a step in a direction contrary to all teachings of the prior art, have produced an improved structure, the tremendous advantages of which have made it a great commercial success. The improvement consists of providing a construction in which the carrying handle, unlike anything shown in or suggested by the prior art, is permanently and rigidly positioned below the tops of the bottles to be carried in the carton. Lebold being an innovator instead of a follower, *Pointer v. Six Wheel Corp.*, 177 F. 2d 153 (CCA 9, 1949), disregarded the theories maintained by those who went before him, and as a result achieved a successful structure where others before him, because of their narrow approach, failed.

The low handle arrangement would, at first glance, appear to make the use of the carrier more difficult and inconvenient. This was illustrated by the Judge in the District Court who raised this point (Transcript page 5). However, exactly the opposite is true.

A result of the improvement which is immediately apparent to the person carrying the container is the greater ease in handling as compared with the high handled carriers. The lowered handle makes for better balance resulting in greater ease in lifting and holding the loaded carton in a non-horizontal position. This is due to the fact that the point at which the lifting force is applied is considerably closer to the center of gravity of the loaded carrier than is the case where the handle portion is above the tops of the bottles. (See Plaintiff's Ex. 2, p. 143.)

It might be thought that a user's hand would be scratched when it was placed on the handle between the tops of the bottles in the carrier. However, as was testified by the witness Lebold, and as pointed out in the application the structure is designed to permit the bottles to separate sufficiently to allow convenient and safe insertion of a hand. Thus, inconvenience in reaching the hand hold is eliminated and the possibility of scratching one's knuckles is avoided. (Transcript, pages 39 and 40.)

A most important result of permanently lowering the handle portion below the bottle tops is to greatly increase the strength and durability of the carrier in several ways. There are two main stresses exerted on the handle of the high handle carrier of the type commonly used heretofore. When the handle is above the tops of the bottles, and the hand is placed in the handle grip, the knuckles extend outward sufficiently to rest on the tops of the bottles when the handle is bent slightly. The result of this is that any force exerted by the hand upon the handle, except a purely vertical lifting force, is multiplied by the distance between the knuckles on the tops of the bottles and the handle. The hand actually operates as a lever, with the knuckles on the bottle tops as the fulcrum and the portion of the fingers engaging the hand grip as the end of the lever. Thus, greatly increased forces are exerted upon the handle portion of the central panel, out of all proportion to the weight of the carrier and its contents. (See Plaintiff's Ex. 2, p. 145.)

In addition to the leverage produced by the action of the knuckles on the tops of the bottles, the portion of the central panel protruding above the tops of the bottles is easily twisted because no resistance is provided to the turning of the hand. Inasmuch as the paperboard panels have little strength to resist twisting movement, they are easily torn when so stressed. (Transcript, pp. 42-43.) Thus, by reason of their structure alone, that is, the protrusion of the handle grip portion of the central panel above the tops of the bottles, the high handle carriers are fundamentally weak.

Appellant Lebold's structure completely eliminates both the leverage effect and the twisting effect inherent in the structure of the high handled cartons. Because the central panel does not protrude above the tops of the bottles, it is impossible for the knuckles to bear on the bottle tops and no fulcrum is available to cause the hand to act as a lever exerting greatly increased forces on the handle. Likewise, the twisting effect is eliminated because any turning of the hand in a twisting movement exerts a force on the bottles as well as on the handle, since the hand is down between the necks of the bottles instead of over the tops of the bottles and out of contact therewith. (Transcript, page 39, see Plaintiff's Ex. 2, p. 144.)

Once the weaknesses inherent in the high handle carriers are perceived and the unobvious step by which Appellants eliminate them is appreciated, most of the advantages which follow from the improvement become readily understood. Because the handle has been lowered and the structure through which the leverage and twisting forces were applied in the old form is no longer present, the low handle carton is much stronger. A most beneficial result of this increase in strength has been the almost total elimination of dangerous accidents and injury by glass due to failure of the handle of the carrier. Thus, the users of the cartons benefit by being given a safer carrier while the purveyors of the merchandise contained in the carriers decrease their liability for accidents caused by use of their carriers.

From a commercial standpoint, a very important advantage is gained by the lowering of the handle in that the increased strength increases the durability of the cartons, and it was testified that instead of being used for only one round trip, from the seller to the consumer with the full bottles and from the consumer back to the seller with the empties, the improved carrier of the Appellant may be used for at least four complete round trips. (Tr.

pp. 43, 64.) Thus, over a given period of time only one fourth the number of cartons will be used, with the consequent saving to the seller of soft drinks.

A further commercial advantage important from the standpoint of handling and distribution, is that the improved carriers are strong and rigid enough to permit their use on automatic handling machines, and half cases can be used for distribution of the loaded cartons, (Tr., pp. 65, 66), and when the cartons are stacked an inventory can be made at a glance. This amounts to a very great saving of time on the part of the truckman as much time is lost in checking the quantity of stock on hand.

There remains another startingly unobvious result which cannot be appreciated even by understanding how the unobvious step of lowering the handle strengthens the entire carrier. Paradoxical though it may seem, lighter weight paperboard may be used in Appellants' carrier and still a much stronger structure results. (Tr., pp. 32, 33.) As might be expected, less area of paperboard is used in Appellants' carton due to the reduced height of the center panel, and the Appellant Lebold so testified. (Tr., pp. 30, 31.) Totally unexpected, however, is the possibility of using lighter weight paperboard and yet obtaining a stronger product. This is due to the combination of two factors, the absence of the stresses to which the prior art carriers were subjected, and the rigidity of the structure due to the improved construction. This unobvious result is attributable directly to the change in construction from the high to the low handle and the accompanying cross bracing. An improvement such as this where a substantially lighter weight structure performs as well as those known to the art is recognized as invention by the Supreme Court, *Richmond Co. v. U. S.*, 275 U. S. 331.

Thus, the completely unobvious results of the step Appellants have taken contrary to all teachings of the prior art are greatly to increase the strength of the carrier as well as the ease with which it is handled, both by the user and the distributor, thereby making it safer and more economical, while at the same time decreasing the amount of material used in its manufacture and thus decreasing its initial as well as handling costs.

The step taken by Appellants cannot be considered obvious in view of the prior art and the thinking of those in that art as exemplified by Lyons, discussed above. As was pointed out, Lyons, being convinced that the low handle was not only inconvenient but undesirable for carrying purposes, went to great effort to provide a handle which would be in high position while being used and to avoid a structure in which the handle would be in the low position permanently. None of the results achieved by Appellants by lowering their handle permanently are suggested by the structure of Lyons and his pointing out the desirability of having the handle in the low position when the carrier is at rest. Because the hinged portions are weakened with each movement of the handle up or down, and because the raised handle is subjected to all the twisting and leverage action the same as other high handle carriers, Lyons' carrier is not strengthened by his construction, but is weakened even more than is a conventional high handle carrier.

Further support for the conclusion that Lyons had no conception of the advantages to be gained by permanently and rigidly positioning the handle in the low position is found in the fact that the owners of the Lyons patent have repudiated their own and adopted Appellants' idea. (Tr., p. 49.) Appellants submit that stronger evidence of a truly inventive step than acknowledgment of the desirability of a later patentee's product by an earlier patentee would be hard to discover.

Appellants submit that the Lyons reference is best described as an effort by which Appellants' improvement was almost, but not quite, stumbled upon. However, this does not warrant refusing Appellants their reissue, because as Mr. Justice Bradley, speaking for the Court in *Loom Co. v. Higgins*, 105 U. S. 580, 591, said:

> "But it is plain from the evidence, and from the very fact that it did not, for years, occur in this light to even the most skillful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value, and to bring it to notice * * * At this point we are constrained to say that we cannot yield our assent to the argument, that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention. Now that it has succeeded, it may well seem very plain to any one that he could have done it as well."

Appellants believe that the District Court, while it may have been cognizant of all the above mentioned considerations, failed to consider the magnitude of the step taken from the standpoint of the inventor about to take it, but rather, using hindsight, viewed the apparently simple solution to the problem and found no invention. The law is clear that this is not the test to be used in determining an inventor's right to a patent, *Diamond Rubber Co. v. Consolidated Rubber*, 220 U. S. 428, and it has been so held by this Court, *In re Huff*, 48 App. D. C. 258.

Thus, it is clear when viewed from the standpoint of the art at the time he took the step that Lebold's improvement in structure created by a reorganization of the parts which included lowering the carrier handle below the tops of the bottles constitutes great progress in the art. Those before Appellants believed it necessary to have the handle of a holder above the tops of the bottles in order to carry it. Appellants have proved the idea false, and their advance has resulted in the many unobvious and unexpected results discussed above, none of which was known or suggested by the prior art. Such an improvement is clearly an invention and the words of this Court in *Mathieson Alkali Works v. Coe,* 69 App. D. C. 210, 99 F. 2d 443 are clearly applicable:

> "In our view, therefore, the discovery made by applicants in this case constituted invention. Their process was not taught by the prior art; *in fact it contradicted the teachings of the prior art,* and in so doing produced a new and useful result." (Emphasis added.)

Here, as there, the ruling of the District Court should be reversed.

4. ANY DOUBTS AS TO WHETHER APPELLANTS' IMPROVEMENTS CONSTITUTE INVENTION ARE RESOLVED BY THE IMMEDIATE AND WIDESPREAD COMMERCIAL SUCCESS OF APPELLANTS' STRUCTURE.

There is ample evidence in the record to show that Appellants' structure was immediately and widely accepted by commercial interests supplying paperboard containers for packaging soft drinks, and this was so found as a fact. (Finding of Fact 11, Appendix, p. 23.)

It is Appellants' position, as above pointed out, that there is no doubt that the improvement involves invention. However, if there is any such doubt, it must be resolved in favor of the Appellants, *In re Rowell,* 48 App. D. C. 238.

What Appellants have done here is to combine features suggested in the prior art with an entirely new feature to obtain a structure neither shown nor suggested by the prior art. They are the first to bring into successful public service the particular structure which is the subject of the first patent and the subject of the present reissue application. That this combination has been approved by the public, as evidenced by the extensive commercial success, is strong evidence of invention, *In re Coykendall,* 58 App. D. C. 280, 29 F. 2d 868, *Carbide & Carbon Chemicals Corporation v. Coe,* 69 App. D. C. 372, 102 F. 2d 236, if not persuasive, *Minerals Separation, Ltd. v. Hyde, supra.*

Since Appellants' device was such an immediate commercial success, replacing similar types of carriers almost immediately upon its appearance, it is obvious that the earlier devices in the art were unsatisfactory. No one, until Appellants appeared with their structure, had succeeded in constructing a carrier for soft drink bottles having all the advantages inherent in Appellants' device. That Appellants succeeded so brilliantly where many others before them had failed is extremely persuasive evidence of invention, *Application of Wilson*, 49 App. D. C. 76, 258 F. 976; *In re Rowell, supra.*

5. THE DISTRICT COURT FAILED TO COMPREHEND THE NATURE AND MAGNITUDE OF THE INVENTOR'S IMPROVEMENT.

The District Court erred in refusing to authorize the reissue of Appellants' patent. Apparently it failed to recognize the full import of the evidence before it, as is apparent from the first paragraph of the decision in which it stated:

> "The plaintiff claims a reissue patent on cartons, or carriers, for bottles containing beverages; the carton having a handle, the top of which is below the tops of the bottles in the carton."

This statement of the invention is much too broad, as the protection sought is far more limited than this would suggest. Appellants are seeking to obtain a reissue with specific claims. For example, as set forth in the claims, Appellants are seeking protection upon a carrier with a central panel which, in its fully extended upright load suspended position relative to the walls with bottles positioned in the carrier and suspended by the panel, terminates at a level not above the plane of the tops of the bottles and sufficiently low with relation to such plane to permit vertically aligned stacking, and with the panel provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of the panel.

The Court had before it Appellants' original patent 2,460,229, a certified copy of the file wrapper and contents thereof consisting of 158 pages, and a certified copy of the file wrapper and contents of the pending application for reissue consisting of 161 pages. However, the Court did not have the time to consider these in detail, but only to make the broad observation quoted, evidently without fully understanding the subject matter.

In paragraph 2 of the opinion, there occurs the broad statement that:

> "* * * cartons or cardboard carriers for bottles containing beverages are old."

Then the Court added that:

> "There is very little room for invention in this field."

Appellants do not think that there is any basis for this conclusion. It is possible that it may be as incorrect as the conclusion of the Patent Office Examiner of some years ago that it was time for him to resign from the Patent Office because there was nothing more to invent.

In the fourth paragraph of the opinion it was held that:

> "* * * The plaintiff made an improvement * * * The testimony demonstrates the superiority * * * and also shows that the new device has come into common use."

In the 5th paragraph reference was made to:

> "* * * The forward step taken by the Applicant * * *"

And in the next to the last paragraph it is stated:

> "Finally, it must be borne in mind that there is a presumption of correctness, which attaches to the finding of the Patent Office that invention is lacking.

> That is a finding of fact. Unless it is overcome by convincing evidence, the Court must sustain that finding."

Although a bottle carrier may appear at first glance to be a simple and easily understood structure, the foregoing discussion points out the significance of apparently minor changes. What may appear to one not familiar with the soft drink industry to be of small moment has proven to be of such importance that the industry has substantially universally accepted the modified structure and repudiated what has been used heretofore. A full comprehension and appreciation of the problems presented, the prior art structures, and Appellants' improvement are undoubtedly difficult to grasp during a trial of very limited duration.

Considering the subject matter briefly as it was only possible for the Court to do in the fraction of a day consumed by the trial and the decision from the bench, the Court failed to achieve a full realization of Appellants' invention and its significance. It therefore sustained the ruling of the Patent Office and rendered judgment for defendant, thereby denying the authorization of the reissue.

In paragraph 5 of the opinion, it was stated that:

> "The Patent Office, however, declined to issue a patent to cover the forward step taken by the applicant, because a handle, the top of which reaches below the tops of the bottles, is disclosed in the patent to Lyons No. 2,296,937."

This statement, likewise, is much broader than the protection sought. In the reissue it is desired to obtain protection for a specific type of bottle carrier in which there is a rigid, fixed handle which terminates below the tops of the bottles at all times, both while the handle is being used and when the carrier is at rest on a supporting surface.

In the Lyons patent the handle is above the tops of the bottles when it is in use and then only, and due to its flexibility it can be pushed downwardly beneath the tops of the bottles when the handle is not in use. This causes bending with accompanying weakening, of each side relative to the center panel and obvious detachment after a few bendings. As illustrated in the Lyons patent, it was thought necessary to have the handle in its uppermost position for proper carrying of the bottles and not only was the desirability thereof emphasized, but the undesirability of any other arrangement was also emphasized.

Appellants, however, had a flash of genius. They discovered that, contrary to teachings, the low handle was the desirable thing. It gave new, improved, useful, unobvious, unexpected, desirable results which, according to the holdings of the decisions of all of our courts, including those relied upon by the District Court, and when subjected to every test and measured by every standard known to the Patent Office and to the Courts, Appellants' achievement fulfills every requisite of invention, and clearly leaves no doubt of invention or the fact that Appellants are entitled to a reissue of their patent. The fact that the District Court failed to recognize the significance of the evidence and the flash of genius, although there was strong evidence of the same, as was shown by the immediate and widespread commercial acceptance of Appellants' holder including the owner of the Lyons reference who repudiated that patent by his adoption of the low handle, should not prevent the granting of the reissue patent.

CONCLUSION

The record is clear that the advance by which improved, unobvious, unexpected results were obtained amounts to an invention over the prior art and in accordance with the recent decision of this Court in Broderson v. Marzall, (App. D. C., November 23, 1951), 91 USPQ 259, it is submitted that the holding of the District Court should be reversed and the Commissioner of Patents be authorized to grant to Appellants the reissue sought.

Respectfully submitted,

A. Yates Dowell,
Attorney for Appellant.

JOINT APPENDIX

Appeal No. 11302

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COMPLAINT

Filed August 11, 1950

Civil Action for Issuance of a Patent

1. This action arises under Revised Statutes, Section 4915 (U. S. C. Title 35, Sec. 63). No appeal has been filed in the United States Court of Customs and Patent Appeals under Revised Statutes, Section 4911 (U. S. C. Title 35, Sec. 59*a*).

2. The plaintiff, Samuel N. Lebold, is a citizen of the United States and a resident of Chicago, in the County of Cook, and State of Illinois.

3. The plaintiff, Morris Paper Mills, is a corporation duly organized and existing under the laws of the State of Illinois, and it has its principal place of business at Chicago, Illinois.

4. The defendant, John A. Marzall, is the Commissioner of Patents of the United States, a legal resident of the District of Columbia, and is sued as Commissioner of Patents of the United States.

5. On January 18, 1950, the plaintiff, Samuel N. Lebold, on behalf of and with the consent of plaintiff Morris Paper Mills, filed in the United States Patent Office an application, Serial No. 139,141, entitled "Bottle Holder", for reissue of Patent 2,460,229 granted on January 25, 1949 to said Morris Paper Mills as the result of an application Serial No. 776,553 filed on September 27, 1947 by said Samuel N. Lebold and assigned to said Morris Paper Mills. Plaintiff, Morris Paper Mills, is the sole and exclusive owner of the entire right, title and interest in and to said Patent 2,460,229 as well as said application Serial No. 139,141 for reissue thereof. Said patent and application for reissue thereof pertain to improvements and in-

novations in bottle carriers of the type constructed of paperboard and widely used for carrying by hand six bottles of beverage.

6. Said application Serial No. 139,141 was examined by the Primary Examiner, who refused to allow any claim, and who, on April 3, 1950, finally rejected claims 3, 4, 5, 6 and 7, being all of the claims then pending in the application. Each and all of these claims were rejected as unpatentable over Patent 2,273,266 to Himes in view of Patent 2,296,937 to Lyons, or on Lyons in view of Himes. An appeal was duly taken from the final rejection by the Primary Examiner, to the Board of Appeals, which tribunal by its decision dated July 11, 1950, affirmed the action of the Primary Examiner as to all of the appealed claims. By this action the defendant refused and still refuses to grant a patent for the invention set forth in said application Serial No. 139,141 as claimed in claims 3, 4, 5, 6 and 7 thereof. Copies of application Serial No. 139,141 with the rejected claims will be furnished at the trial.

7. The claims in issue are as follows:

> 3. A carrier for a plurality of like beverage bottles of predetermined girth and height, said carrier being formed of a single piece of flexible paperboard which is foldable to provide, when erected, a flexible bottom, a pair of flexible side walls connected to the bottom, a flexible, vertically extending, laterally deflectable panel midway between and terminating above said side walls, and flexible transverse partition means, said transverse partition means extending between said panel and respective side walls and subdividing the space on opposite sides of said panel into cells for individual bottles, said panel in its fully extended upright load suspending position relative to said walls,

with bottles positioned in the carrier and suspended by the panel, terminating at a level which is not above the plane of the tops of such bottles loaded in said carrier and is sufficiently low with relation to said plane as to permit vertically aligned stacking of like loaded carriers on top of said carrier without distortion of said panel, and said panel being provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of said panel.

4. A paperboard carrier, as defined in claim 3, in which said partition members are cut at least in part from the material of said respective side walls and serve to subdivide the space on either side of said panel into at least three bottle receiving cells, the side wall portion defining an intermediate cell being vertically stepped in height relative to the side wall portions of the cells at either side thereof.

5. A carrier for a plurality of like beverage bottles of predetermined girth and height, said carrier being formed of a single piece of flexible paperboard which is foldable to provide, when erected, a flexible bottom, a pair of flexible side walls connected to the bottom, a flexible vertically extending, laterally deflectable panel midway between and terminating above said side walls, said panel having at all times a vertically fixed relation to said side walls in the erected condition of the carrier, and flexible transverse partition means, said transverse partition means extending between said panel and respective side walls and subdividing the space on opposite sides of said panel into cells of fixed longitudinal and transverse dimensions for the reception of individual bottles, said panel in its fully extended upright load suspending position relative to said walls, with bottles positioned in the car-

rier and suspended by the panel, terminating at a level which is not above the plane of the tops of such bottles loaded in said carrier and is sufficiently low with relation to said plane as to permit vertically aligned stacking of like loaded carriers on top of said carrier without distortion of said panel, and said panel being provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of said panel.

6. A carrier for a plurality of like beverage bottles of predetermined girth and height, said carrier being formed of a single piece of flexible paperboard which is foldable to provide, when erected, a flexible bottom, a pair of flexible side walls connected to the bottom, a flexible vertically extending, laterally deflectable panel midway between and terminating above said side walls, said panel having at all times a vertically fixed relation to said side walls in the erected condition of the carrier, and flexible transverse partition means, said transverse partition means extending between said panel and respective side walls and being hinged thereto on vertically extending hinge lines, thereby subdividing the space on opposite sides of said panel into cells of fixed longitudinal and transverse dimensions for the reception of individual bottles, said panel in its fully extended upright load suspending position relative to said walls, with bottles positioned in the carrier and suspended by the panel, terminating at a level which is not above the plane of the tops of such bottles loaded in said carrier and is sufficiently low with relation to said plane as to permit vertically aligned stacking of like loaded carriers on top of said carrier without distortion of said panel, and said panel being provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of said panel.

7. A package comprising a paperboard bottle carrier, and a plurality of like bottles of predetermined girth and height contained thereby, said carrier including a bottom, a pair of flexible side walls connected to the bottom, a vertically extending panel disposed between and terminating above said walls in fixed vertical relation to the latter, said respective walls being spaced laterally from said panel a distance approximately equal to the bottle diameter, and transverse partition means in collapsible relation to and disposed between said panel and respective walls and bendably connected to the former on vertically extending hinges, said partition means being adapted in the erected condition of the carrier to subdivide the space on opposite sides of said panel into cells of predetermined, fixed longitudinal and transverse dimensions which accommodate said bottles, the upper edge of said panel terminating lower than the top of said bottles in said cells both when the package is suspended by said panel and when resting on a bottom support to afford a space of constant size for the reception of the user's hand among said bottles and to enable stable, non-wobbling, vertically aligned stacking of loaded carriers one on top of another, each supported by the bottles in the subjacent carrier, said panel having provision for manually suspending the loaded carrier with the user's knuckles between necks of the bottles.

8. One-piece paperboard bottle carriers as set forth in the pending claims of Lebold Application Serial No. 139,141 have superseded bottle carriers manufactured and sold by the owners of and by licensees under Lyons Patent No. 2,296,937, Himes Patent No. 2,273,266 and Slevin Patents Nos. 2,322,396 and 2,367,066, for several reasons, to-wit: the Lebold carrier is stronger and more durable even though requiring fewer square inches of board of reduced

thickness; it is cheaper; it carries the load safer and more comfortably; and when loaded it can be transported from the bottler to retailers more economically; and, it can be stacked in retail stores without weakening manipulation or distortion of the handle.

9. The above-named claims are, by plaintiffs, considered to be patentable.

10. It was error on the part of the Primary Examiner and the Board of Appeals to hold that such claims did not involve invention in view of said patents to Lyons and Himes.

11. It was error on the part of the Board of Appeals to sustain the Primary Examiner in rejecting said claims.

12. The plaintiff, Morris Paper Mills, is legally entitled to receive a patent.

Plaintiffs pray that a decree issue out of this Court authorizing defendant to issue a patent to plaintiff, Morris Paper Mills, carrying each of the above-mentioned claims standing in said application.

SAMUEL N. LEBOLD
and
MORRIS PAPER MILLS,

By A. YATES DOWELL,
Attorney for Plaintiffs,
1158 Munsey Building,
Washington 4, D. C.

Of Counsel:
F. M. WARDEN,
38 S. Dearborn Street,
Chicago 3, Illinois.

ANSWER TO THE COMPLAINT

(Filed August 16, 1950)

E. L. Reynolds, Solicitor,
United States Patent Office,
Washington, D. C.
Attorney for Defendant.

To the Honorable the Judges of the United States District Court for the District of Columbia:

1, 2, 3. Defendant admits the allegations of paragraphs 1, 2, and 3 of the complaint.

4. He admits that as Commissioner of Patents he has official residence in the District of Columbia and that he is sued in his official capacity.

5, 6, 7. He admits the allegations of paragraphs 5, 6, and 7.

8. He is not informed, except by the complaint itself, as to the allegations contained in paragraph 8 of the complaint.

9. He admits that the plaintiffs consider the claims in suit to be patentable. He denies that such claims actually are patentable.

10, 11, 12. He denies the allegations of paragraphs 10, 11, and 12.

Further Answering, the defendant states that the plaintiffs are not entitled to a patent containing any of the claims set forth in the complaint for the reasons given and in view of the references cited in the decision of the Board of Appeals and in the Statement of the Primary Examiner in answer to the appeal in the plaintiffs' application here involved. Profert of copies of said decision, statement and references is hereby made.

Respectfully submitted,

E. L. Reynolds,
Solicitor, U. S. Patent Office,
Attorney for Defendant.

August 16, 1950

I hereby certify that a copy of the foregoing Answer to the Complaint was mailed today, August 16th, 1950, to Mr. A. Yates Dowell, 1158 Munsey Building, Washington 4, D. C., attorney for Plaintiff.

E. L. Reynolds,
Solicitor.

1 TRANSCRIPT OF TESTIMONY

IN THE
UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil Action No. 3483-50

Samuel N. Lebold, and Morris Paper Mills, plaintiffs
v.
John A. Marzall, Commissioner of Patents, defendant

Washington, D. C.,
October 22, 1951.

The above-entitled action came on for trial on the merits before the Honorable Alexander Holtzoff, United States District Judge, at ten o'clock a. m.

Appearances:

On behalf of the plaintiffs:
Franklin M. Warden, Esq., (Chicago, Ill.)
and
A. Yates Dowell, Esq., (Washington, D. C.)

On behalf of the defendant:
Joseph Schimmel, Esq.

3 Proceedings

* * *

5 The Court: What is the advantage of the handle not extending above the top of the bottles? I would think it would be handy if the handle was above the bottles; it would be easier to carry.

Mr. Warden: That doesn't happen to be the case.

* * *

28 Samuel N. Lebold, one of the plaintiffs, being first duly sworn, was examined and testified as follows:

Direct Examination.

By Mr. Warden:

* * *

30 Q. This economy of use you were speaking of, would you tell us very briefly what is involved in the economy of use of a paperboard carrier?

31 A. The low-handle paper carrier requires less paperboard by area—what was your question?—pardon me.

* * *

32 I ask the pending question for you to point out, very briefly, whether or not the construction set forth in your pending application, and in the patent we are seeking to reissue, provides for, let us say, cheaper price, more economy of use, and safer, stronger construction—will you point out very briefly?

The Court: Which construction?

Mr. Warden: The construction of the pending application over the construction of Himes and over the construction of Lyons.

The Court: Very well.

33 The Witness: It uses less paperboard by area. It uses lighter weight, thinner paperboard, and by its construction it can be used in half-depth cases as against full-depth cases. It uses less area in a dealer's store.

By Mr. Warden:

Q. What about strength?

A. It is much stronger.

Q. Much stronger than what?

A. It is much stronger than the high-handle carrier shown by either Lyons or Slevin.

* * *

39 A. The cross-partition runs from this outer-wall to the outer wall and holds this handle perfectly rigid and firm; it is not movable. When a hand is put in here (indicating)—

Q. In where?

A. In-between the two bottles, it is not possible to twist the handle and break it.

The Court: Is there a possibility of scratching one's hand on the edges of the caps on the bottles?

The Witness: It can happen. However, there has been sufficient space left here to avoid that.

By Mr. Warden:

40 Q. In what way does it avoid it, Mr. Lebold? Point out to the Court, please.

A. Because when one's fist is placed down in the bottles, the bottles are permitted to spread out. These side-walls are so constructed as to permit the bottle to lean outwardly.

* * *

41 By Mr. Warden:

Q. Now, the question was, so far as cross-partitions are concerned, is there any substantial difference between the cross-partition in Himes and the cross-partition in Lebold?

A. No.

Mr. Warden: So that the matter comes down, your Honor, to the difference in the height of the handle portion.

The Court: And the Lyons Patent discloses a handle below the tops of the bottles.

Mr. Warden: At certain times. We will come to that in just a second.

* * *

42 Q. The question is, demonstrate the difference, if any, that there is between having a high-handle carrier and a low-handle carrier.

43 A. In the low-handle carrier, it makes it necessary for the hand to be between the bottles, and you cannot twist the handle and break it.

With the high-handle carton, when the hand is placed in the handle-grip, the tops of the bottles will act as a fulcrum in twisting the handle out and tearing it.

That was the problem that always faced us in our work from the bottlers. People had bundles of groceries under their arms; they would pick up a carton and try and open an automobile door, or put this into their refrigerator, and in so doing would get their knuckles on top of the bottles, which acted as a fulcrum, and tear the carton out. This was completely unsatisfactory and was discarded by the industry. The low handle eliminated that problem completely.

* * *

Q. Could you make more round trips with the low-handle?

A. They made four trips with the low-handle, where the high-handle made one.

* * *

49 Q. What can you say about the construction of bottle carriers presently being offered for sale by the owner of the Lyons Patent, which I understand is the Empire Box Company, and by the owner of the Himes Patent?

A. They are all making low-handle carriers.

* * *

57 CROSS EXAMINATION.

* * *

58 By Mr. SCHIMMEL:

Q. Mr. Lebold, isn't it true that one of the prime objects of your invention was to permit the stacking of the filled cartons one above the other in a vertical plane?

A. That is one point.

Q. Isn't it true that Lyons discloses that that is the advantage of having the low-handle container?

A. Yes.

* * *

62 CHARLES H. BERRY, was called as a witness by the plaintiffs, and being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION.

* * *

64 A. We ran rather exhaustive tests in the Coca Cola Company, which revealed that the high-handle carton made a maximum of one trip.

By Mr. WARDEN:

Q. One round trip?

A. One round trip.

The COURT: And how many trips did the low-handle carrier make?

The WITNESS: Four.

* * *

65 Q. Now, is there any saving—because Mr. Lebold didn't get to that—with respect to the use of cases?—and if there is, point it out very, very quickly to the Court.

A. The use of low-handle cases has made it possible to utilize the so-called half-depth cases.

Q. You mean, the low-handle carton?

A. The low-handle carton and the half-depth case;
66 it has made it possible to utilize the so-called half-depth case in all respects exactly as the conventional bottle case. It does not require any special handling anywhere in the bottling industry.

Q. And what are the advantages of having a low-depth case, or half-depth case, in so far as the processing, as you call it, or the cost of operation of a bottler is concerned, and why is it so?

A. Primarily, it makes it possible to check the load going into and out of the bottling plant. It is customary to have a checker check on the product on the truck as it comes—

The COURT: You are not answering the question at all.

The WITNESS: Excuse me.

By Mr. WARDEN:

Q. The question is, how does this permissive use of the half-depth case enter into the cost of operation of a bottler, and why?

A. I was simply going to say that it reduces the extra labor of checking it, handling it.

* * *

BOTTLE HOLDER

Original Filed Dec. 11, 1944

2 Sheets-Sheet 1

g.1

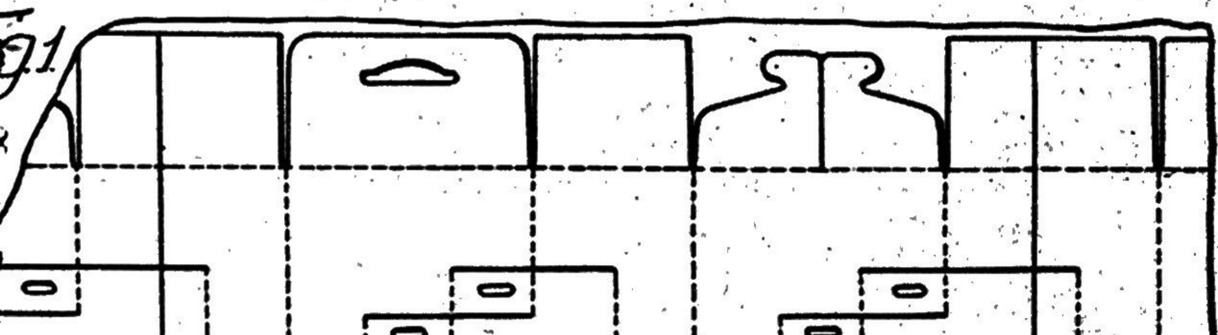


Fig.3

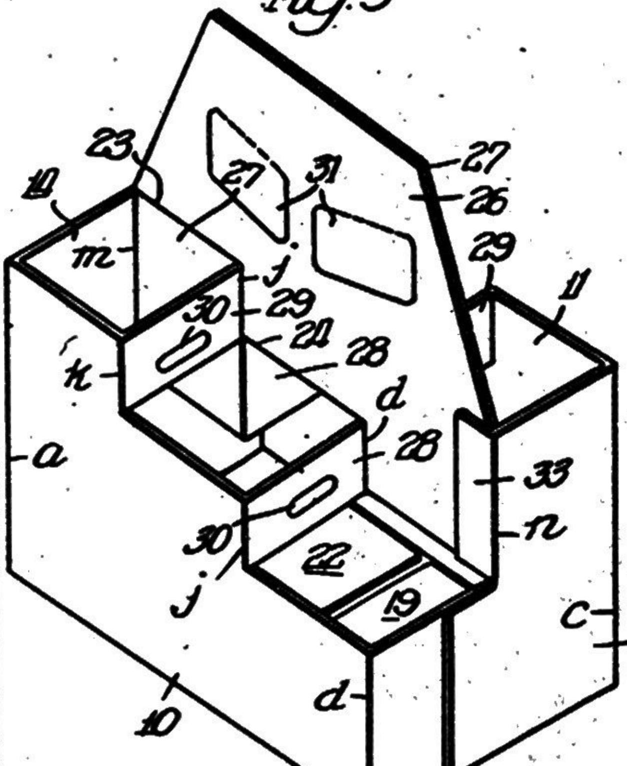
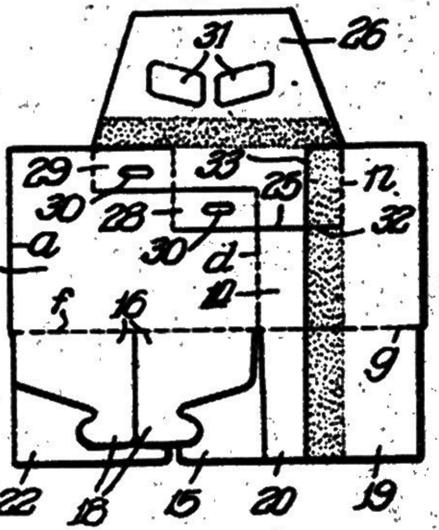


Fig.2



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an. 25, 1949. **S. N. LEBOLD** 2,460,229

BOTTLE HOLDER

Original Filed Dec. 11, 1944 2 Sheets-Sheet 2

Fig. 4

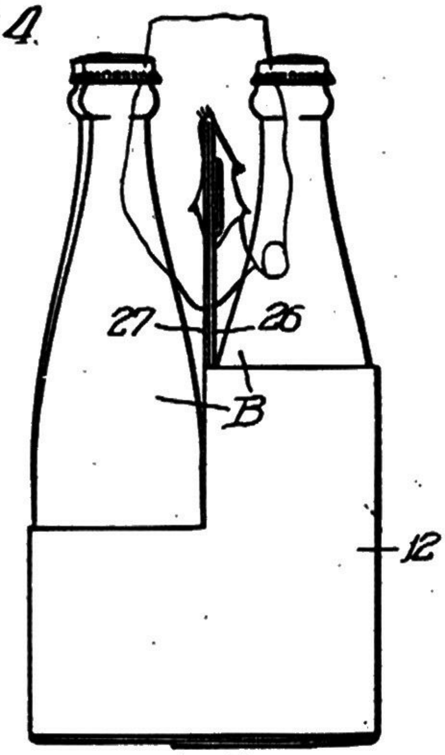


Fig. 5

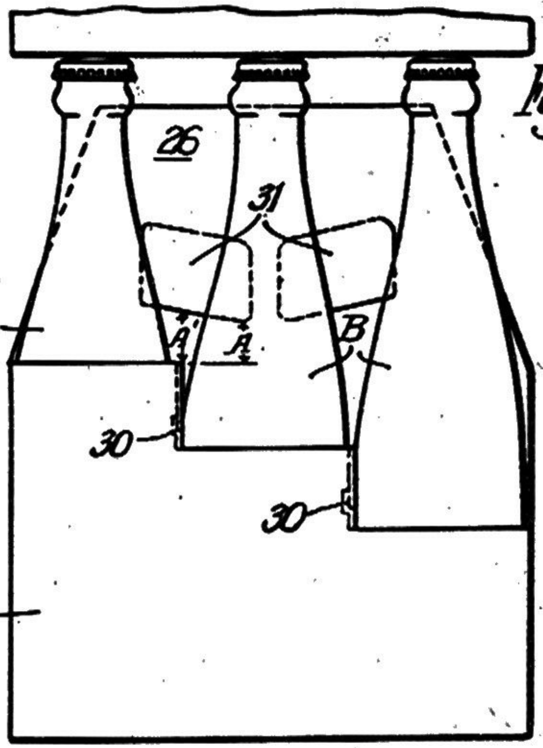


Fig. 6

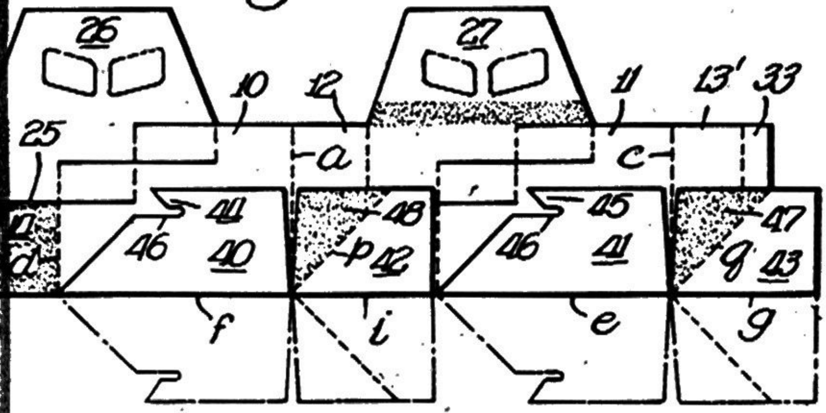


Fig. 7

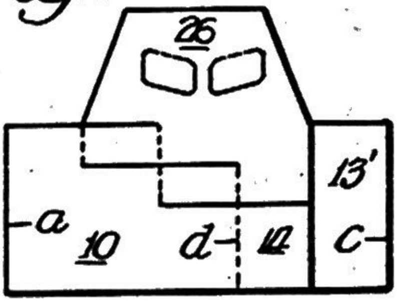


Fig. 8

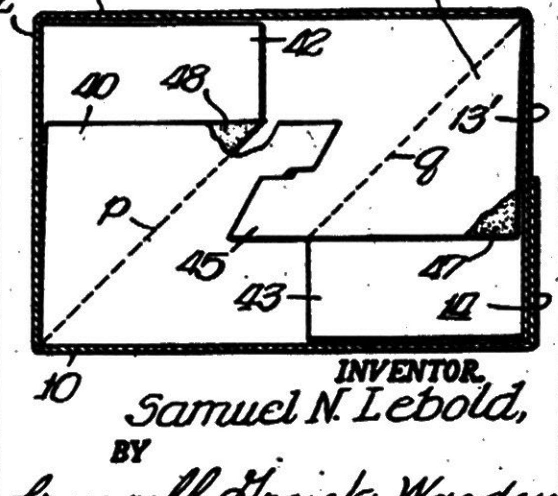
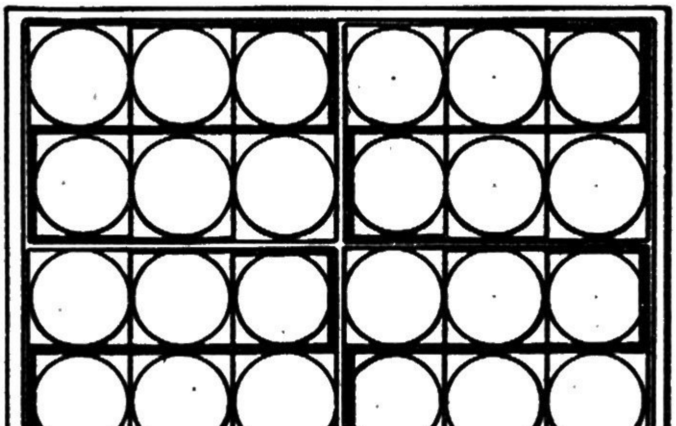


Fig. 9



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UNITED STATES PATENT OFFICE

2,460,229

BOTTLE HOLDER

Samuel N. Lebold, Chicago, Ill., assignor to
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Continuation of application Serial No. 567,560,
December 11, 1944. This application September 27, 1947, Serial No. 776,553

4 Claims. (Cl. 229—52)

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This invention relates to the packaging of bottles of beverage, and similar articles, for transportation by hand. More particularly, it pertains to a package of bottles or similar articles and a carrier or holder for forming such a package of a character such that a plurality of bottles or similar articles is securely retained in association to constitute a unit which may be carried conveniently in the hand. This is a continuation of my co-pending application Serial No. 567,560, filed December 11, 1944 for Bottle holders, now abandoned, which in turn is a continuation in part of my application Serial No. 544,594, filed July 12, 1944 and also entitled Bottle holders, now Patent No. 2,389,318.

A general object of the invention is the provision of such a package which comprises a carrier or holder that may be made of paper board or similar sheet material and in which the bottles will be securely retained and effectively safeguarded, and yet which may be produced very economically and supplied to users at low cost, because of the simplicity of the manufacturing operations involved and the relatively small amount, both as regards thickness or weight and area, of paper board material required to give the necessary strength and to afford proper retention and protection for the bottles.

A particular object is the provision of a package of the sort above referred to wherein the paper board holder or carrier, and particularly the handle portions whereby the package is supported, are effectively safeguarded against twisting, extreme flexion, and other distortion such as would tend to weaken the material and parts of the structure and thereby contribute to tearing or failure of them in the contemplated uses.

A specific object of the invention is the provision of a package and holder of such character that comparatively light paper board may be employed effectively for the secure packaging and carrying of groups of conventional bottles of the 12-ounce size and larger.

Another object is the provision of a holder affording the advantages stated above, which may be made complete from a unitary flat blank formed to provide partitions and walls affording a plurality of bottle-receiving compartments and having said compartments so arranged that bottles may be deposited in all of them simultaneously by straight vertical movement, and, moreover, wherein the compartment partitions are afforded secure support and effective protection and are adapted to prevent injurious contact of the bottles.

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Another object is the provision of a package and a holder of character such as to facilitate the stacking of a plurality of such packages upon one another for purpose of display or the like, without involving any distortion or adjustment of any portions of the holders or subjecting them to injurious loading, and wherein the bottles will be securely and effectively retained in proper position and relationship to carry the load of the superimposed packages.

Another object is the provision of such a package and holder of such character that the contained bottles are effectively safeguarded when groups of the packages, four or more for example, are disposed and handled in trays, crates or cases for transportation in the bottling plant or in course of distribution to dealers.

Another object is the provision of an improved paper board holder or carrier whereby the foregoing objects may be attained and which may be produced rapidly and in quantities on conventional cutting and printing presses and may be fabricated complete in the box factory in collapsed or knocked-down condition such as to conserve space in packaging, storage and shipment to users, and which may be set up quickly and easily by users at the point of use without requiring any special apparatus or additional or extraneous fastenings.

A further object is to provide a carrier having the above advantages, and in addition characterized by a novel arrangement of suspending means thereon, with resultant increased comfort in use and unimpaired strength.

Other and further objects of the invention will be pointed out or indicated hereinafter, or will be apparent to one skilled in the art upon employment of embodiments of it in actual use.

For purpose of aiding in a description of the invention, I show in the accompanying drawings, and hereinafter describe, certain forms in which it may be embodied. It is to be understood, however, that these are presented merely for purpose of illustration, and hence are not to be accorded any interpretation calculated to impose on the appended claims any limitations which are not necessitated by the prior art.

In said drawings,

Fig. 1 is a plan or lay-out showing, in the heavily outlined portion, one complete blank of form suitable for production of an embodiment of the invention, the lay-out showing the side of the blank which forms the inner side of the completed carrier, and serving also to show how a number of such blanks may be cut simultaneously from a sheet of suitable material, in association with one another such as to avail of the material without substantial waste;

Fig. 2 is a side view of a holder or carrier formed from a blank such as shown in Fig. 1, portraying the carrier in its completely fabricated form but in the flat collapsed condition in which it is supplied to users;

Fig. 3 is a perspective view of the same carrier in its fully set-up condition, ready for reception of its intended load of bottles of beverage or the like to form a complete package embodying my invention, the illustration in Fig. 3 being on somewhat larger scale than those in the preceding figures;

Fig. 4 is an end elevational view of a package embodying my invention and comprising a carrier of the form shown in Fig. 3 loaded with beverage bottles of conventional form and 12-ounce size, the illustration showing the manner in which the bottles cooperate with the holder to prevent distortion of the handle portions when the package is carried in the hand;

Fig. 5 is a side elevational view of the same package, illustrating the manner in which the parts of the package cooperate to afford support for another similar package or packages, as in stacking for display;

Fig. 6 is a plan or lay-out view of another design of blank for forming a similar package and a carrier of modified form, the figure showing in folded positions portions of the blank which are shown in dot-and-dash lines in the positions in which they are originally cut from the sheet;

Fig. 7 is a side view of a completed carrier made from the blank illustrated in Fig. 6, showing the same in its flat collapsed condition;

Fig. 8 is a cross section of the carrier of Fig. 7 in set-up condition, showing a top view of its bottom with some parts broken away to reveal underlying parts; and

Fig. 9 is a diagram in the nature of a plan or top view of a case or tray containing four of the packages such as illustrated in Figs. 4 and 5, and serving to show how the holders cooperate mutually to afford the bottles effective protection in such relationship.

The general objects and some of the characteristics of the invention having been pointed out above, a fuller understanding of it may be most quickly ascertained from the following description of the embodiments illustrated.

In Fig. 1 is illustrated an arrangement wherein a plurality of identical blanks may be cut simultaneously from a sheet of paper board by a single die in a cutting press, and it will be observed that the several blanks are so internested that there is very little waste of material. One of the blanks shown is heavily outlined and the reference characters are applied to it, the other blanks having corresponding parts. It will be seen that the blank is cut and creased to provide a pair of similar side wall panels 10 and 11 which are connected at crease lines *a* and *b* by an end wall panel 12, and are conjoined at their outer ends, along crease lines *c* and *d* respectively, to end wall panel sections 13 and 14.

A slotted bottom flap 15 is conjoined to the lower margin of side panel 11 at crease line *e* and is formed with a locking slot 17. A pair of hooked bottom flaps 16 are conjoined to the lower margin of side panel 10 along crease line *f* and are disposed in marginal abutment with each other and formed at their outer ends with hooks 18 adapted for interlocking cooperation with bottom flap 15 at the ends of slot 17. An end flap section 19 is conjoined to the lower margin of end panel section 13 along crease line *g* and an end flap section 20 is conjoined to the bottom margin of end panel section 14 along crease line *h*. An end flap 22 is conjoined to the lower margin of end panel 12 along crease line *i*. Each of said flaps is approximately coextensive with its conjoined panel on their junction line.

Slits 23, 24 and 25 extend completely through the blank and serve to mark off handle panels 26 and 27 from the various wall panels, said slits defining the lower margins of said handle panels, and, in conjunction with upward prolongations of crease lines *b* and *d* and additional vertical crease lines *j*, *k* and *m* serve to define partition strips 28 and 29 connecting the side panels with respective handle panels. These partition strips may be formed with shallow cushioning embossments 30. Tabs 31 are slotted out of the handle panels along end and bottom margins and are flexible out of the sheet along crease lines at their tops to afford finger holes. The upper corner portion of end panel section 13 is marked off by a slit 32 and a crease line *n* to form a glue tab 33.

The blank having been cut and creased on the cutting press in the form just described, after having been printed on a suitable printing press if desired, is ready for the further fabricating operations. These comprise, first, application of adhesive to the areas marked with stippling on the handle panel 27, glue tab 33, end section 13 and end flap 19. This may be accomplished in a conventional gluing and folding machine. Then side panel 10 and handle panel 26 are folded over along crease line *a* onto panels 11, 12 and 27, the handle panels thus becoming adhesively secured to each other in locations corresponding to the stippling. Then end section 13 and flap section 19 are folded over along crease line *c* onto the upwardly presented surfaces of handle panel 26, end section 14 and flap section 20, so that glue tab 33 becomes adhesively secured to handle panel 26, end section 13 to end section 14, and flap section 19 to flap section 20, slit 32 being in coinciding relationship with the end portion of slit 25. This completes the fabrication of the holder, and it is in the flat folded condition shown in Fig. 2 wherein the light stippling indicates the areas wherein the parts are connected by adhesive.

To set up the holder from its collapsed condition, the opposite margins, which now lie on crease lines *a* and *c*, are pressed toward each other. This swings end panel 12 and the opposite end panel, formed by adhesively connected sections 13 and 14, to angular relationship with the side panels and the handle panels, the overlying panels swinging apart from one another on crease lines *a* and *c* and conjoined coplanar panels swinging to angular relationship with each other on crease lines *b*, *d*, *m* and *n*. This angular swinging of the end panels moves the side panels outwardly away from the handle panels and swings the partition strips to angular relationship with the side and handle panels.

The holder having been thus folded to place the adjacent wall panels in angular relationship to define the rectangular form of the holder, the end flaps 22 and 19 are folded inwardly along lines *i* and *g*—*h*, and slotted flap 15 is folded inwardly on crease *e*. Hooked flaps 16 are then folded inwardly and their hooked end portions are overlapped one upon the other, so as to permit the insertion of the hooks through the slot 17. This having been done and the flaps 16 having been released, they spring outwardly to their laterally abutting positions, thus engaging the hooks 18 with the flap 15 at the ends of the slot 17 and securing the flaps 15 and 16 to each other so that they support themselves and the end flaps at approximately right angles to the wall panels to from a double or two-ply bottom for the holder. This completes the setting up of the holder and it has the form illustrated in Fig. 3.

In Figs. 6, 7 and 8 is illustrated a modified embodiment having an improved bottom construction of the automatic or self-locking type. Excepting for the bottom construction, it is substantially identical with the carrier above described in all particulars, and like reference characters are applied to corresponding parts. The blank is shown in Fig. 6, and it will be observed that the wall and handle panels are identical with those of the blank shown in Fig. 1, with the exception that the end panel 13' is somewhat wider than the end panel 13. Here the four bottom flaps are designated respectively by the reference numerals 40, 42, 41 and 43, 40 and 41 being side bottom flaps and 42 and 43 being end bottom flaps. The side bottom flaps 40 and 41 are formed with interlocking tabs 44 and 45 shaped to afford interengageable hook portions beyond locking slots 46. The end bottom flaps 42 and 43 are formed with oblique or diagonal folds creases *p* and *q*, the first extending from the corner of flap 42 adjacent the intersection of fold creases *a* and *f*, and the fold crease *q* extending from the corresponding corner of flap 43 adjacent the intersection of fold creases *c* and *g*. These fold creases mark off connecting tabs 48 and 47 in the respective end flaps. After the blank is cut out as shown in full lines, the bottom flaps are folded over along fold lines *f*, *f*, *e* and *g*, onto the upwardly presented surfaces of their conjoined wall panels 10, 12, 11 and 13', from the positions indicated by the dot-dash lines. Adhesive is applied to areas of handle panels and end wall section 14 indicated by stippling in Fig. 6, and also to the entire upwardly presented surfaces of connecting tabs 47 and 48. Then the blank is folded on crease line *c* so as to place the adhesive bearing surface of connecting tab 47 upon the upwardly presented surface of side bottom flap 41, and next the blank is folded on the crease line *a* so as to place the upwardly presented surface of side flap 40 upon the upwardly presented adhesive bearing surface of connecting tap 48 and to place the handle panels in register with each other and the adhesive bearing surface of end wall section 14 upon the upwardly presented surface of end panel 13' and the adhesive bearing surface of handle panel 26 upon the upwardly presented surface of glue flap 33. Thus the handle flaps are adhesively secured in coinciding relationship, the end portion of handle panel 26 is secured to glue flap 33, end wall section 14 is adhesively secured to end panel 13', and side bottom flaps 40 and 41 are adhesively secured to respective connecting tabs 42 and 43 of the end flaps. The holder as thus completely folded and fabricated is in the collapsed or flat folded form illustrated in Fig. 7, the bottom flaps remaining in their folded positions between the wall panels.

To set up this holder from its flat collapsed form, pressure is applied to move fold creases *a* and *c* toward each other, thereby swinging the

end wall panels into angular relationship with the side wall panels and handle panels and moving the side wall panels 10 and 11 outwardly away from the handle panels and longitudinally relative to each other. Coincident with this relative movement of the wall panels, the bottom flaps are all swung downward because of their connection thereto across the corners by attachment of the side bottom flaps 40 and 41 to the respective connecting tabs 48 and 47. This downward swinging of the bottom flaps is accommodated by folding of the connecting flaps 48 and 47 along the diagonal crease lines *p* and *q*, so that said connecting flaps are swung over onto what is to be the upper or inner surfaces of end bottom flaps 42 and 43 as the flaps approach their horizontal position, perpendicular to the wall panels. It is to be observed that as the flaps 40 and 41 swing downwardly, they also shift longitudinally relative to each other as side panels 10 and 11 move longitudinally with the angular swinging of the end wall panels. This relative longitudinal movement of flaps 40 and 41 is such as to swing their interlocking hooks toward each other, but the downward swinging movement of those flaps is such that the interlocking tab of each of them is moved to overlapping or crossed relationship with the swinging margin of the other flap while the tabs 44 and 45 are still clear of each other. During the further downward swinging movement of the bottom flaps, the longitudinal movement of flaps 40 and 41 brings their hooks and slots 46 into interlocking relationship, and they are fully seated in crotched interengagement when the flaps reach their horizontal position at right angles to the wall panels. In this, the fully set-up position of the bottom, the interlocking tabs 44 and 45 of the respective side bottom sections overlap and lie upon the opposite side bottom flaps for a substantial distance beyond the longitudinal median line of the bottom, and the connecting tabs 47 and 48 are in-folded between the side and end bottom flaps, end flap 43 resting upon the upper surface of side flap 40 and end flap 42 upon the upper surface of side flap 41. The internal apearance of the bottom is shown in Fig. 8, and it will be observed that the construction forms a very tight bottom in which there is liberal overlapping of the bottom flaps across all of the diagonal joint lines as well as across the median joint line. Moreover, the bottom is of at least two-ply thickness in the major portion of the area of each bottle compartment.

A very similar automatic bottom construction can be made with a blank of the form illustrated in Fig. 6 but eliminating the diagonal creases from the end bottom flaps and forming them, instead, in the side bottom flaps so that they extend obliquely from the corners at the junctions of the fold creases *c*—*e* and *a*—*f*, with the result that the connecting tabs are formed on the side bottom flaps rather than on the end bottom flaps. The folding of this modified bottom will be the same as that last described, the bottom flaps being first folded over onto their conjoined wall panels and the adhesive being applied to the then upwardly presented surfaces of the connecting tabs on the side bottom flaps, so that, upon the further folding on crease lines *c* and *a*, the end bottom flaps will be placed upon the connecting tabs and adhesively secured thereto. Upon the setting up of the carrier with this bottom construction, the end bottom flaps will lie on the upper or inner sides of the interlocked side bottom flaps and will extend completely across the bottom of the erected carrier to locations closely adjacent the side panels. As in the embodiment first above described, this complete bridging of the bottom by the stiff and uncreased end bottom flaps carries the weight of the bottles over to locations closely adjacent the side and end wall panels, thus relieving the interlocking bottom parts of tearing stresses.

Excepting for details of the bottom and near end panel, Fig. 3 serves to illustrate the external appearance of any of the three embodiments in its fully erected condition. It will be observed that in each the bottom structure provides a very stiff platform which holds the wall structure definitely in its rectangular form, maintaining the end walls and the partition strips 28 and 29 in the desired relationship to the connected handle panels 26 and 27 to form two rows of bottle compartments, and to maintain those compartments in their fully open or distended condition. Consequently, these carriers are particularly adapted for loading by automatic or semiautomatic means whereby the full complement of bottles for a carrier is arranged in proper relationship and then dropped simultaneously into the compartments, bottoms first and in upright positions.

Other characteristics of the structure particularly qualify carriers of these constructions for loading in that fashion. In the first place, the stiff two-ply bottom affords a desirable cushioning effect for the bottles when they drop onto it. In the second place, the partition strips are afforded maximum strength because of the fact that they extend directly and in the shortest lines from the side panels to the handle panels and are connected throughout their height with said panels. The portions of the side panels to which the partition strips are connected are continued in full height along the sides of the compartments, and thus serve to safeguard the outer end connections of the trips against being caught or broken by the dropping bottles. The partition strips are stiffened somewhat by the embossments 30, though the primary purpose of these is to give these partitions additional cushioning effect between the juxtaposed bottles.

In Figs. 4 and 5 is illustrated a completed package embodying this invention, such as may be formed with a carrier of either of the forms above described. The example here shown is a package comprising six beverage bottles of conventional shape. An important feature of this improved package is a particular relationship of carrier and bottles whereby they cooperate to safeguard the handle parts against deflection or distortion such as might break or weaken them. It will be understood, of course, that the package is designed to be carried pendulously in the hand, the tabs 31 being folded laterally and upwardly out of the handle panels to afford finger holes through which the fingers of the hand may be introduced to grasp the handle which is thus provided at the upper portions of the handle panels.

The carrier is proportioned, of course, with reference to the size and form of the bottles which it is intended to carry in any particular instance, and when it is designed for holding six bottles, as here illustrated, its length is such as to accommodate three of the intended bottles standing close together in a row, and its width is such as to accommodate two bottles standing side by side, suitable allowance being made, of course, for the intervening partition strips and the interposed lower portions of the handle panels. Accordingly, the dimensions of each bottle compartment are such as to accommodate a single bottle with sufficient freedom to permit it to drop into place by gravity, yet retain it against any substantial extent of lateral shifting movement in the compartment when seated therein. Accordingly, when the carrier has its load of intended bottles, they are retained quite securely in upright positions, and held against any substantial degree of tilting movement in any direction.

Heretofore, in the designing of bottle carriers having handles formed by portions of the blank, it has been regarded as necessary or desirable to position the portions of the handle which are grasped in the hand at a sufficient distance above the height of the intended bottles to permit the hand to be almost entirely clear of their upper ends. I have conceived and demonstrated, however, that certain quite important advantages are to be attained by so proportioning the carrier in reference to the intended bottles that none of the handle parts extends above the topmost surfaces of the bottles or bottle closures. This particular of the structure is illustrated in Figs. 4 and 5 wherein it will be seen that the upper margins of the handle panels are located an appreciable distance below the tops of the bottle caps, and, in fact, below the lower margins of the cap skirts. Of course, the exact location of the handle in reference to the height of the bottles is susceptible of considerable variation such as may be best suited to the form of bottle involved in any given instance, and, while it is recognized that there are types of short necked or high shouldered bottles which are not adapted for use in the present invention, the intended results are obtainable with beverage bottles of nearly all of the conventional shapes and proportions, substantially all of which have upper portions which are tapered more or less gradually to relatively thin necks which attain a diameter less than half the width of the bottle body, the portions which are materially reduced in diameter comprising approximately one-third, more or less, of the total height of the bottle. The bottles illustrated in Figs. 4 and 5 are of a very common type used quite extensively, in 12-ounce size, for the packaging of beverages. It is to be understood, however, that the invention is not to be regarded as limited, for its utility, to bottles of that capacity or of that particular shape.

Nevertheless, an analysis of conventional beverage bottles and the conventional, commercial paperboard carriers in which they are sold for home consumption reveals that the relationship between the height of the bottles and any, substantially non-variable carrier dimension that is available as a standard of comparison, such as the length of the carrier side wall 10, may be represented by a ratio, which ratio will serve as a basis for calculating the permissible height of panel 26, in accordance with the present invention. This bottle height—wall length ratio ranges in various commercial products from less than 1.2:1.0 to 1.4:1.0, but never, so far as I have been able to ascertain, in excess of 1.5:1.0. Therefore, in relating the height of the suspending panel 26 of the present carrier to the side wall length of the carrier, provision is made that the ratio of these dimensions is preferably less than and certainly never in substantial excess of 1.5:1.0.

An important characteristic of the bottles, from the standpoint of the present invention, is that when assembled in the carrier in two rows of three each, they afford between their upper neck portions sufficient space for accommodation of a hand or fist of normal size, thereby permitting the handle parts to be grasped and supported in the hand at a location below the tops of the bottles, as illustrated for example in Fig. 4. The middle of the handle, longitudinally considered, is between the two middle bottles, and the thumb of the hand finds a location between the necks of the middle and end bottles in the row on the inner or thumb side, while the knuckles of the second and third fingers straddle the neck of the middle bottle on the outer or knuckle row. If the fist is large, the middle bottle may be tilted outward slightly as illustrated in Fig. 4, but this does not interfere with its support or security or with the comfortable carrying of the package. Most bottles which are closed by caps of the crown type are formed with peripherally bulging portions or guard collars just below the margins of the skirt caps and projecting outwardly substantially as far as do said margins, for the purpose of safeguarding the caps against catching on the rim of the case or other adjacent object, and in the present package these bulges or guard collars function also as effective guards against scratching of the hand by the skirt margins when the hand is inserted or withdrawn from the holding position. For best protection of the knuckles, it is desirable that the handle be located so low that the finger knuckles are well below the caps, as illustrated for example in Fig. 4.

It will be observed that the finger holes take the form of parallelograms of which the top and bottom sides are inclined downwardly toward the center of the handle panel. The difference in height of the inner and outer top corners of each of the parallelogram-shaped tabs amounts to about one-fourth inch. This drops the user's knuckles sufficiently below the top of the handle panel to bring them well below the relatively sharp skirt of the bottle cap.

By providing that the upper sides of the finger holes converge downwardly and inwardly of the sides of the handle panel, I likewise considerably increase the comfort of the user in transporting the carrier, for this shape distributes the weight to be carried by the fingers uniformly over the four fingers normally engaged in the finger holes. I have found that with prior types of finger holes by far the greater portion of the weight was carried by the second and third fingers, with very little supported by the index and little fingers. With the above arrangement of the finger holes, a far more even distribution of weight results, with resultant increased comfort. A still further feature of considerable importance from the standpoint of strength is the fact that the formation of the finger holes as downwardly and inwardly sloped parallelograms enables the holes to be disposed the maximum distance from the top of the handle panel which is consistent with adequate strength in the panel. Thus, if the finger holes were in the form of rectangular parallelograms, and were disposed downwardly from the top of the handle panel a distance corresponding to that shown in Fig. 5 and designated A, insufficient material would be left between the lower edge of the finger hole and the top of the vertical hinge line for the highest partition strip to give adequate strength at this point. However, since in the improved structure the botom edges of the parallelogram-shaped finger holes slant upwardly and outwardly, additional clearance, represented by the character B, is provided between the hinge line for the partition strip and the finger hole.

These provisions enable the finger holes to be brought as far down in the panel 26 and as nearly proximate the upper edge of the cross partition 28 as is possible, consistent with necessary strength. As a result, the upper extremity of the panel is also lowered relatively close to said upper partition edge.

Several important advantages are gained by the location of the handle below the top of the bottles. In the first place, it effects very substantial saving of paper board material, as compared with the amount which would be required if the handle panels were made high enough to locate the hand-hold portions above the tops of the bottles. In the second place, the short handle facilitates accurate control of the package in the operations of carrying it or stacking it or placing it in or removing it from cases, as compared with carriers having handle panels of the greater height. This is noticeable simply in the carrying of the package, as the low handle gives it a very compact and balanced feeling.

Probably the most important advantage is the great saving in paper board material which results from the greatly increased safety factor. With the hand thus pocketed down among the necks of the bottles, the latter act as limiting elements which prevent lateral flexion of the handle panels and handle parts to an extent where the paper board material may be torn or its fiber broken or permanently bent. Furthermore, due to the limitation imposed by the bottle necks on lateral flexion and twisting of the handle parts, they and the handle panels are definitely safeguarded against the whipping and weaving actions which are likely to impose inertia shocks and tearing stresses on the handle parts when the latter are long, particularly when the packages are being picked up suddenly as in rapid handling. Still another important safety advantage accrues from the fact that it is unnecessary to crease or bend any of the handle parts at any time or for any purpose. In various types of carriers and packages heretofore used, wherein the paper board handle parts extend above the tops of the bottles, it has been found necessary or desirable to crease or score them in order to permit their being bent over laterally to lie flat on the tops of the bottles in order to permit the stacking of other packages on them, either for display or for purpose of transportation in trucks or the like. Not only does such creasing or scoring necessarily weaken the fiber of the paper board, but the mere fact that portions of the handle stick up above the bottles exposes them to mutilation when the packages are handled in cases or stacked.

By virtue of these several safety factors which result from the use of the low handle and its protection by the associated bottles, the present invention renders it possible to effectuate very substantial savings in paper board material. These savings result not only from the saving in actual area of material made possible by the shorter handle, but more particularly by the saving in weight or thickness which it allows. Because the handles are safeguarded against injurious flexion, whipping action, inertia shocks and the like, and because they do not have to be bent or creased or scored, the handle panels may be made of very much lighter or thinner material of the same quality than can the high handle carriers with a similar factor of safety.

Inasmuch as the handle panels may be made lighter, the entire carrier may be made of lighter material, because it is the handle parts which have to carry the greatest load.

The angular disposition of the pair of parallelogram-shaped finger holes furthers the above advantages of the same by increasing the user's comfort while carrying the bottles, due to more equal distribution of the weight on the fingers. Any possibility of scratching of the user's knuckles is avoided by low and inclined disposition of the finger holes; and all this is made possible without a resultant tendency to weaken the container at the handle by the mentioned angular disposition of the holes.

Reference has been made above to certain advantages flowing from the manner in which the partition strips are formed in the blank and arranged in the completed package. Further advantages reside in the fact that the bottle compartments may be made of adequate, or even excess, depth, thereby affording secure retention for the bottles, it being observed that the outer walls afford continuous or unbroken envelopment of the outwardly presented sides of the bottles. The arrangement of the partition strips produces wall panels of stepped or graduated height, which contributes certain features of novelty in appearance of the package, and affords extensive areas for advertisemental and decorative printing. A further advantage resides in the fact that the arrangement is such that when a plurality of the packages is placed in a case or tray for handling or shipment, usually four to the case, the high wall portions of one package meet the low wall portions of the juxtaposed packages. This is illustrated in Fig. 9 wherein the heaviest boundary lines are intended to indicate the highest wall portions, the lightest lines to indicate the lowest wall portions and the intermediate lines to indicate the wall portions of intermediate height. In the handling of cases in bottling plants for loading on trucks or the like, they are sometimes fed by gravity on roller conveyors or chutes, down which the cases travel one after another to the delivery point. As they frequently move with considerable speed, the bottles may be subjected to very considerable inertia shocks due to colliding of the cases or sudden stopping of them. As there is necessarily a certain amount of freedom of movement of the packages within the cases or trays, it has been a not unusual experience that bottles in juxtaposed packages of kinds heretofore used have been broken by being dashed forcibly against one another in such handling. By the arrangement of the boundary wall portions in the present package as above described, the bottles are afforded complete protection against the dashing of those of one package against those in juxtaposed packages.

What I claim is:

1. A paperboard carrier for a plurality of like bottles, said carrier including a bottom, a pair of flexible side walls connected to the bottom, a vertically extending panel disposed between and terminating above said walls, and transverse partition means in collapsible relation to and disposed between said panel and respective walls and adapted to subdivide the space on opposite sides of said panel into cells to accommodate said bottles, the ratio of the height of said panel in its normal, fully extended upright position to the length of one of said side walls being less than 1.5:1.0, the upper edge of said panel terminating below the top of said bottles in said cells to enable stable, non-wobbling, vertically aligned stacking of loaded carriers one on top of another, each supported by the bottles in the subjacent carrier, said panel having provision for manually suspending the loaded carrier with the user's knuckles between the necks of the bottles.

2. A package comprising a paperboard bottle carrier, and a plurality of like bottles of predetermined girth and height contained thereby, said carrier including a bottom, a pair of flexible side walls connected to the bottom, a vertically extending panel disposed between and terminating above said walls, said respective walls being spaced laterally from said panel a distance approximately equal to the bottle diameter, and transverse partition means in collapsible relation to and disposed between said panel and respective walls and bendably connected to the former, said partition means being adapted to subdivide the space on opposite sides of said panel into cells which accommodate said bottles, the upper edge of said panel terminating lower than the top of said bottles in said cells to enable stable, non-wobbling, vertically aligned stacking of loaded carriers one on top of another, each supported by the bottles in the subjacent carrier, said panel having provision for manually suspending the loaded carrier with the user's knuckles between necks of the bottles.

3. A carrier for a plurality of like beverage bottles of predetermined girth and height, said carrier being formed of a single piece of flexible paperboard which is foldable to provide, when erected, a flexible bottom, a pair of flexible side walls connected to the bottom, a flexible, vertically extending, laterally deflectable panel midway between and terminating above said side walls, and flexible transverse partition means, said transverse partition means extending between said panel and respective side walls and subdividing the space on opposite sides of said panel into cells for individual bottles, said panel in its fully extended upright position terminating at a level which is not above the plane of the tops of such bottles loaded in said carrier and is sufficiently low with relation to said plane as to permit vertically aligned stacking of like loaded carriers on top of said carrier without distortion of said panel, and said panel being provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of said panel.

4. A paperboard carrier, as defined in claim 3, in which said partition members are cut at least in part from the material of said respective side walls and serve to subdivide the space on either side of said panel into at least three bottle receiving cells, the side wall portion defining an intermediate cell being vertically stepped in height relative to the side wall portions of the cells at either side thereof.

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500,786	Great Britain	Feb. 15, 1939

Feb. 17, 1942. R. A. HIMES 2,273,266

BOTTLE CARRIER

Filed March 28, 1941 2 Sheets-Sheet 1

Fig.1.

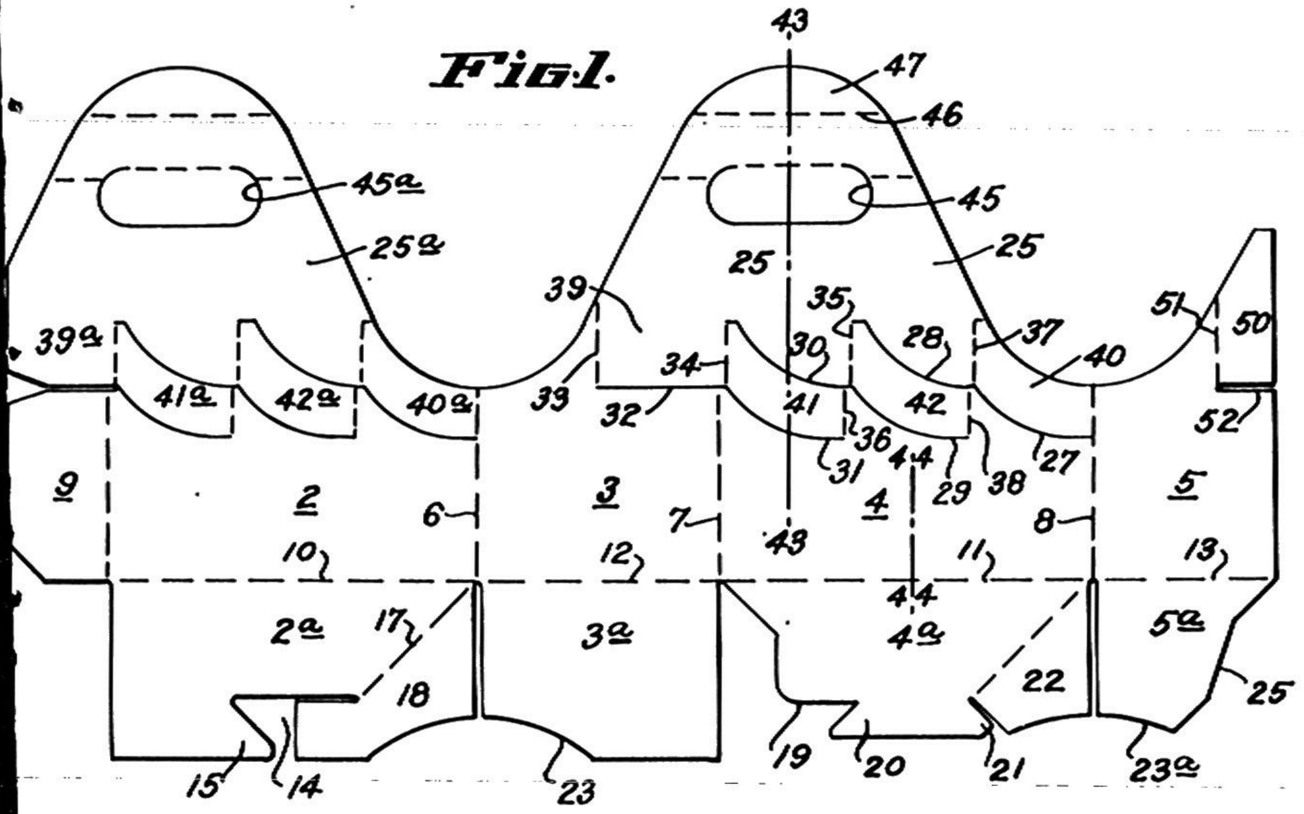
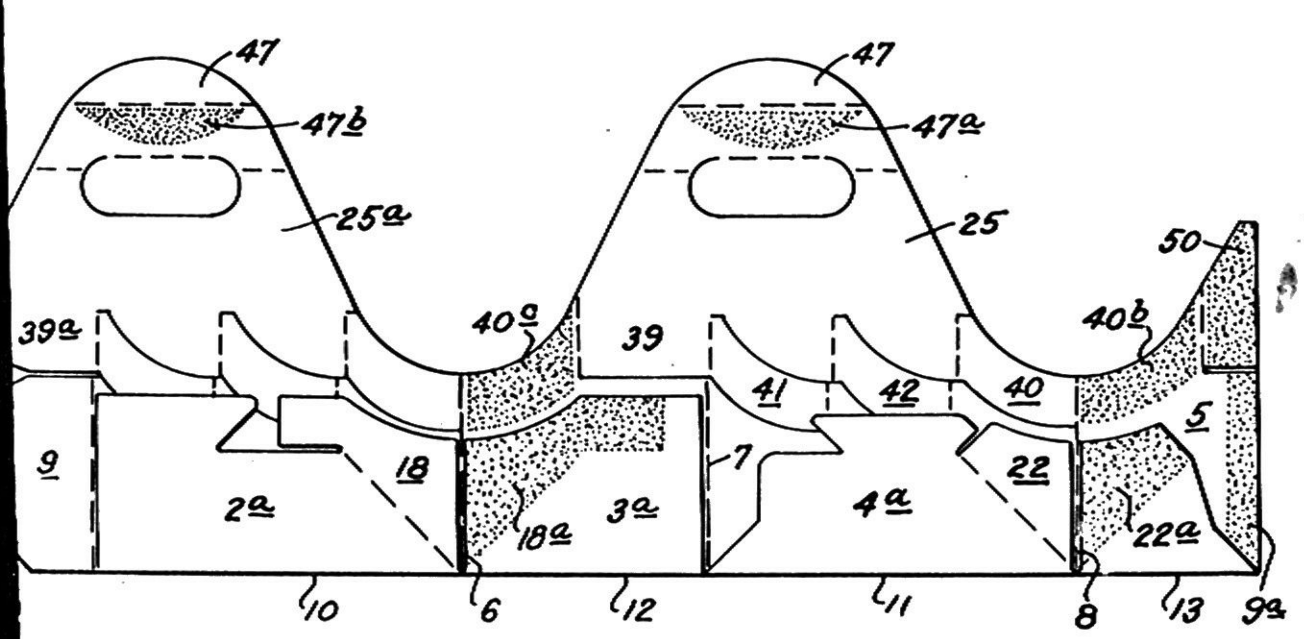


Fig.2.



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BOTTLE CARRIER

Filed March 28, 1941 2 Sheets-Sheet 2

Fig. 3.

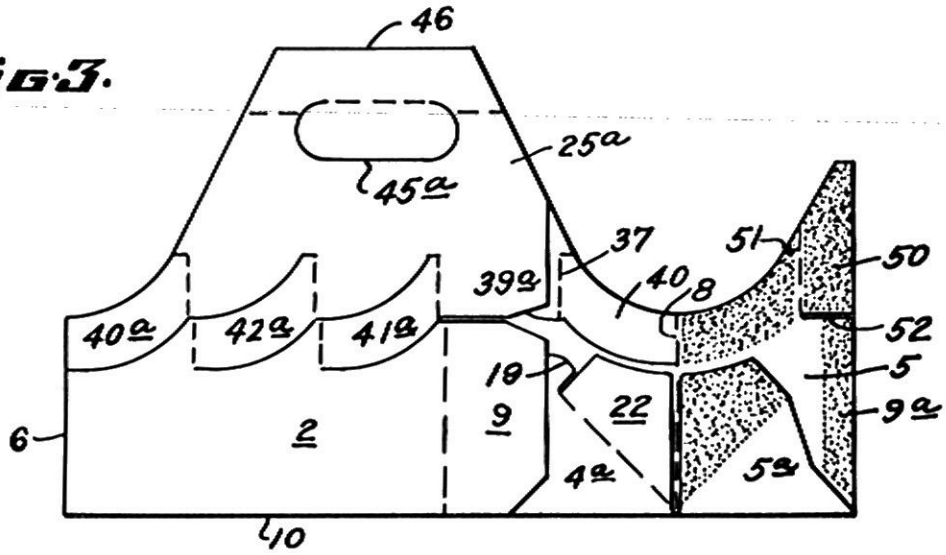


Fig. 4.

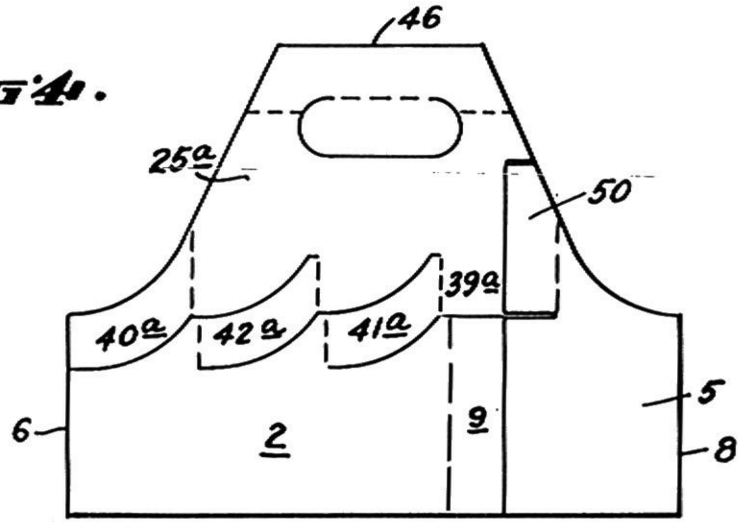
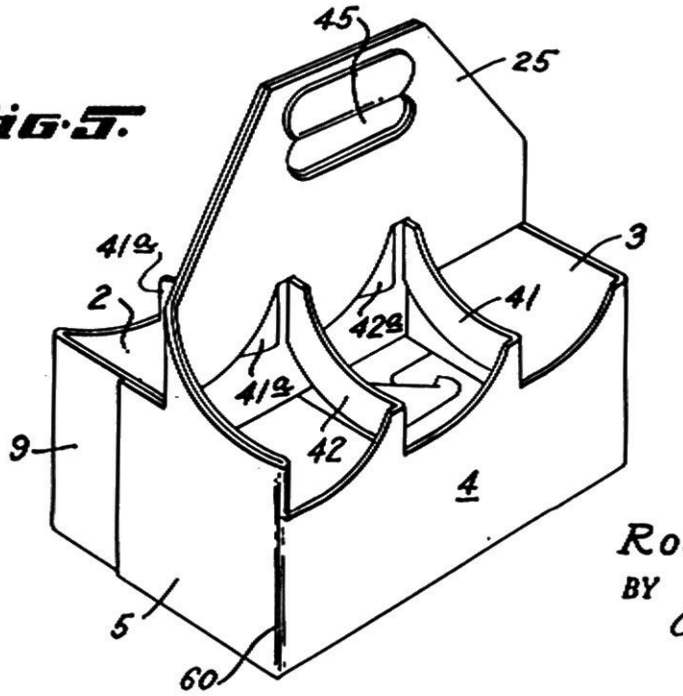


Fig. 5.



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Patented Feb. 17, 1942 **2,273,266**

UNITED STATES PATENT OFFICE

2,273,266

BOTTLE CARRIER

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Application March 28, 1941, Serial No. 385,668

10 Claims. (Cl. 229—52)

This invention relates to a bottle carrier, and particularly to a bottle carrier which may be made from cardboard or like material in flat folded form and which is capable of being opened or extended in one operation to form a bottom, side and end walls and a handle whereby the bottle carrier may be carried.

The object of the present invention is generally to improve and simplify the construction and operation of carriers of the character described; to provide a carrier in which the bottom structure, the side and end walls and the handle, are made from a single blank, said blank being cut and creased so that the carrier may be folded, assembled and glued in flat form, and when so assembled may be opened in one operation, forming a complete carrier ready to receive the bottles to be carried; to provide a handle composed of two sections of cardboard and both sections registering when the carrier is opened for use to form a single handle; to provide a handle which is firmly attached both to the side and end walls of the carrier to permit a comparatively heavy load to be carried without danger of the handle tearing from the side and end walls; and further, to provide a carrier blank which may be formed from a minimum of material.

The carrier is shown by way of illustration in the accompanying drawings, in which

Fig. 1 is a plan view of the bottle carrier blank;

Fig. 2 is a similar view showing the first folding operation of the blank, which is longitudinally thereof and which causes the bottom sections to overlie the side and end wall sections of the carrier, said view also showing the areas to which glue is applied;

Fig. 3 is a similar view showing the first transverse folding operation of the partially folded blank;

Fig. 4 is also a similar view showing the last and transverse folding operation of the partially folded blank, which completes the folding and assembling of the blank; and

Fig. 5 is a perspective view of the bottle carrier in extended or open position ready to receive bottles.

Referring to the drawings in detail, and particularly to Fig. 1, a bottle carrier blank is shown which is cut and creased to form a pair of side wall sections 2 and 4 and a pair of end wall sections 3 and 5. These sections are foldably connected by crease lines formed at the points indicated at 6, 7 and 8 and the side wall section 2 is provided with a creased flap 9 which serves to connect the free corners of the box when assembling the same.

The bottom of the box is formed from a pair of side bottom sections 2a and 4a foldably joined to the respective side wall sections 2 and 4 by crease lines 10 and 11, and a pair of end bottom sections 3a and 5a are foldably joined to the respective end wall sections 3 and 5 by crease lines 12 and 13.

The side bottom section 2a is cut away as at 14 to form a lug 15, and it is creased as at 17 to form a flap 18 which will hereinafter be referred to as a glue flap. The side bottom section 4a is also creased at one end to form a glue flap 22 similar to the flap 18, and it is cut away as at 19 on its outer edge, to form two lugs 20 and 21. The bottom secton 3a is for all practical purposes left intact, as only a portion of the outer edge is cut in an arc, as shown at 23, to provide a clearance space hereinafter to be described. The end bottom section 5a has a similar clearance cut as shown at 23a, and one end is cut away as indicated at 25. The glue flaps 18 and 22 are also provided with arcuate cuts similar to the end bottom sections 3a and 5a, and they are also cut for the purpose of clearance.

Formed integrally with the end wall 3 and the side wall 4 is a handle section 25. This handle is cut along the curved lines indicated by the numerals 27 to 31 inclusive, and by a straight line 32 which is parallel to the crease line 12. The handle is creased along the lines 33 to 38 inclusive, and thus forms two connections 39 and 40, one at each end of the handle, and two intermediate connections 41 and 42, which also serve as spacers between bottles as will hereinafter be described.

The connectors 41 and 42 connect the handle section 25 to the side wall 4, the connector 39 connects it to the end wall 3, and the connector 40 to the end wall 5. The handle is thus connected to the bottle carrier at four points, and any danger of the handle tearing away when the carrier is filled with bottles is eliminated. The handle 25 is offset with relation to the side wall 4, as clearly shown in Fig. 1, and the distance it is offset is indicated by the center line 43—43, which is the center of the handle, and the center line 44—44, which is the center of the side wall 4. This distance is approximately half the width of the end wall 3 and the length of the connectors 39, 40, 41 and 42 will accordingly be the same, as the handle must assume a position central or midway between the side walls 2 and 4 when the carrier is opened for use.

The handle is otherwise provided with an elongated opening **45** to permit introduction of the fingers when carrying, and a crease line **46** is formed adjacent the opening to form a flap **47** which may be folded against the surface **47*a*** and glued thereto to reinforce and strengthen the hand grip portion of the handle.

A second handle section is formed on the blank as shown at **25*a***. It is offset with relation to the side wall **2** the same distance as the handle section **25** is with relation to the side wall section **4**. The connectors shown at **40*a***, **41*a*** and **42*a*** are cut and creased in the same manner as the connectors **40**, **41** and **42**, and they are connected to the side wall **2** and the end wall **3** in the same manner as the connectors **40**, **41** and **42** are connected to the side wall **4** and the end wall **5**. The hand grip portion is also the same except that a flap **45*a*** is left to further reinforce and strengthen the hand grip portion. The connector portion **39*a*** is identical to the connector **39** with the exception that it is not connected to an adjacent end wall but must be glued to the end wall section **5** when the blank is being folded and assembled. A flap **50** is accordingly provided which is connected to the end wall **5** by a crease line **51** and cut free at **52** to permit it to bend.

A bottle carrier blank cut and creased in the manner shown in Fig. 1 may be folded and assembled by machine operation or by hand operation, but as no machine is illustrated, let it be assumed that the blank is to be folded, glued and assembled by hand. If that is the case, the first operation in assembling the carrier will be that of folding the side and end bottom sections along the crease lines **10**, **11**, **12** and **13** to overlie the wall sections **2**, **3**, **4** and **5**, as shown in Fig. 2. When this has been accomplished, glue is applied to the dotted areas indicated at **18*a***, **22*a***, **9*a***, **50**, **40*b***, **47*a***, **40*c*** and **47*b***. The flaps **47** at the outer ends of the hand grips are next folded over the glued areas **47*a*** and **47*b***, causing them to adhere thereto, after which the side wall section **2**, together with the handle section **25*a***, the flap **9** and the bottom section **2*a***, are folded on the crease line **6** to overlie the end wall section **3**, the bottom section **3*a***, and to partially overlie the handle section **25**, the side wall section **4**, and the bottom section **4*a***, as shown in Fig. 3. This folding operation causes the connector **40*a*** to be permanently glued to the end wall section **3** at **40*c***, and the flap **18** and the side wall bottom section **2*a*** to become permanently glued to the end wall bottom section **3*a***, at **18*a***. The end wall section **5**, together with the flap **50** and the end wall bottom section **5*a***, are folded on the crease line **8** to assume the position shown in Fig. 4; in doing so, the connector **40** becomes permanently glued to the end wall section **5**, at **40*b***, flap **50** becomes glued to the connector **39*a***, and flap **9** becomes glued to the end wall section **5** by the glue applied to the area **9*a***.

The folding, assembly and gluing of the several parts of the blank is now completed, and a bottle carrier is formed in a flat folded form with the handle sections **25** and **25*a*** in substantial register, and in this condition may be delivered to the trade; and it may be retained in the flat condition until ready for use.

When the folded carrier is to be opened for use, it is merely necessary to push inwardly on the corner **60** and the corner which is diagonally opposite. In doing so, the side and end wall sections of the carrier will reach a position at right angles to each other, the handle sections **25** and **25*a*** will remain in register and will extend longitudinally between the side walls **2** and **4** and substantially midway between them. The connectors **41** and **42** will be disposed on one side of the handle sections and at right angles thereto and will be connected to the side wall **4**, while the connectors **41*a*** and **42*a*** will be disposed in the same position on the other side and will connect with the side wall **2**. The connector **40** will be permanently connected by glue to the end wall **5**, and the connector **40*a*** to the end wall **3**, while the flap **50** will overlie the connector **39*a*** and be permanently attached by glue. At the same time that the side and end walls, together with the handle sections and connectors, are moving into position during opening of the box, the several bottom sections are also moving into position with relation to each other and will assume a flat interlocked position when the carrier is fully opened.

A detailed description of the manner in which the bottom sections interlock and form a support for each other is thought unnecessary, as the bottom structure is fully described in my copending application entitled "Bottom structure for folding paper boxes," filed March 28, 1941, Serial No. 385,669. Suffice it to say that the carrier, including the bottom sections, is opened in one operation and that when opened a rigid substantial carrier is provided which will safely carry six full bottles without any danger of the handles tearing or the bottom sections giving away.

It was previously stated that the glue tab **18** and the outer end of the bottom section **3*a*** had an arcuate cut formed therein for clearance purposes. It was similarly stated that the glue tab **22** and the adjacent end of the end bottom section **5*a*** were also arcuately cut for clearance purposes. The reason that clearance is required is due to the fact that when the bottom sections **2*a***, **3*a***, **4*a***, and **5*a*** are folded to assume the position shown in Fig. 2, a portion of the glue flap **18** would overlie the connector **40*a*** and the adjacent corner of the bottom section **3*a*** partially overlie the glue area **40*c***. Similarly one end of the glue flap **22** partially overlies the connector **40** and the adjacent end of the end bottom section **5*a*** partially overlies the glue area **40*b***. Hence it would not only interfere with the application of glue to the areas **40*b*** and **40*c*** but it would also cause the glue flaps **18** and **22** and the corners of the bottom sections **3*a*** and **5*a*** to become glued in that position when the blank was folded to form the carrier, and the whole device would be inoperative. On the other hand, by forming the arcuate cuts previously described, the corners of several bottom sections will clear the members **40** and **40*a*** and the glue areas **40*b*** and **40*c*** as clearly shown in Fig. 2, and no overlapping or interference will occur.

The bottle carrier constructed as shown can be made from a minimum of material, and it reduces to a minimum hand labor in setting up the carriers. Once it is erected it stays up, and stands alone whether filled with bottles or empty. It saves floor space formerly used for setting up carriers, and adapts itself perfectly to automatic case-filling machines. The ends of the carrier are fully closed, as clearly shown in Fig. 5; thus the carrier is guaranteed against the bottles falling out, and the fully closed ends and bottom prevent dust accumulation and they furnish considerable additional surface for advertising display.

While certain features of my invention have been more or less specifically described, I nevertheless wish it understood that changes may be resorted to within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section, a pair of foldable connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, and a glue tab on one of the end wall sections to receive and secure the free connector.

2. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, and a glue tab on one of the end wall sections to receive and secure the free connector.

3. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, a glue tab on one of the end wall sections to receive and secure the free connector, and foldable intermediate connectors connecting each handle section to an adjacent side wall section.

4. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors on each handle section, one pair of connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, a glue tab on one of the end wall sections to receive and secure the free connector, and a glue tab on one of the side wall sections to connect the free corners of the carrier when it is assembled.

5. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors on each handle section, one pair of connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, a glue tab on one of the end wall sections to receive and secure the free connector, a glue tab on one of the side wall sections to connect the free corners of the carrier when it is assembled, and foldable intermediate connectors connecting each handle section to an adjacent side wall section.

6. A folding bottle carrier having foldably connected side and end walls, side bottom sections and end bottom sections foldably connected to the lower edges of the respective side and end walls, a pair of handle sections foldably connected to the end walls, said side and end walls and the handle sections adapted to lie flat with the side bottom and end bottom sections disposed betwen the side and end walls when the carrier is folded, means for automatically positioning the handle sections centrally and longitudinally of the carrier and in register with each other in unison with the unfolding or opening of the side and end walls, and means for simultaneously extending the side and end bottom sections to form a flat bottom for the carrier.

7. A folding bottle carrier having foldably connected side and end walls, side bottom sections and end bottom sections foldably connected to the lower edges of the respective side and end walls, a pair of handle sections foldably connected to the end walls, said side and end walls and the handle sections adapted to lie flat with the side bottom and end bottom sections disposed between the side and end walls when the carrier is folded, means for automatically positioning the handle sections centrally and longitudinally of the carrier and in register with each other in unison with the unfolding or opening of the side and end walls, means for simultaneously extending the side and end bottom sections to form a flat bottom for the carrier, and foldable means connecting the handle sections with the respective side walls of the carrier, said means lying flat when the carrier is folded and extending crosswise of the carrier when it is unfolded to strengthen the handle sections and to form partition members between bottles placed in the carrier.

8. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a pair of side bottom sections foldably connected to the side wall sections, a pair of end bottom sections foldably connected to the end wall sections, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section, a pair of foldable connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, and a glue tab on one of the end wall sections to receive and secure the free connector.

9. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a

pair of side bottom sections foldably connected to the side walls, a pair of end bottom sections foldably connected to the end walls, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors on each handle section, one pair of connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, a glue tab on one of the end wall sections to receive and secure the free connector, and a glue tab on one of the side wall sections to connect the free corners of the carrier when it is assembled.

10. A bottle carrier blank cut and creased to form pairs of foldably connected side and end wall sections disposed in end-to-end series, a pair of side bottom sections foldably connected to the side walls, a pair of end bottom sections foldably connected to the end walls, a handle section forming an extension of each side wall section, the center of each handle section being offset with relation to the center of each side wall section a distance substantially half the width of the end wall sections, a pair of foldable connectors on each handle section, one pair of connectors permanently connecting one handle section to two end wall sections, the other handle section having one connector permanently connecting it to one end wall section and having the other connector free, a glue tab on one of the end wall sections to receive and secure the free connector, a glue tab on one of the side wall sections to connect the free corners of the carrier when it is assembled, and foldable intermediate connectors connecting each handle section to an adjacent side wall section.

ROSS A. HIMES.

Sept. 29, 1942. J. L. LYONS, JR 2,296,937

COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES

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Fig-1

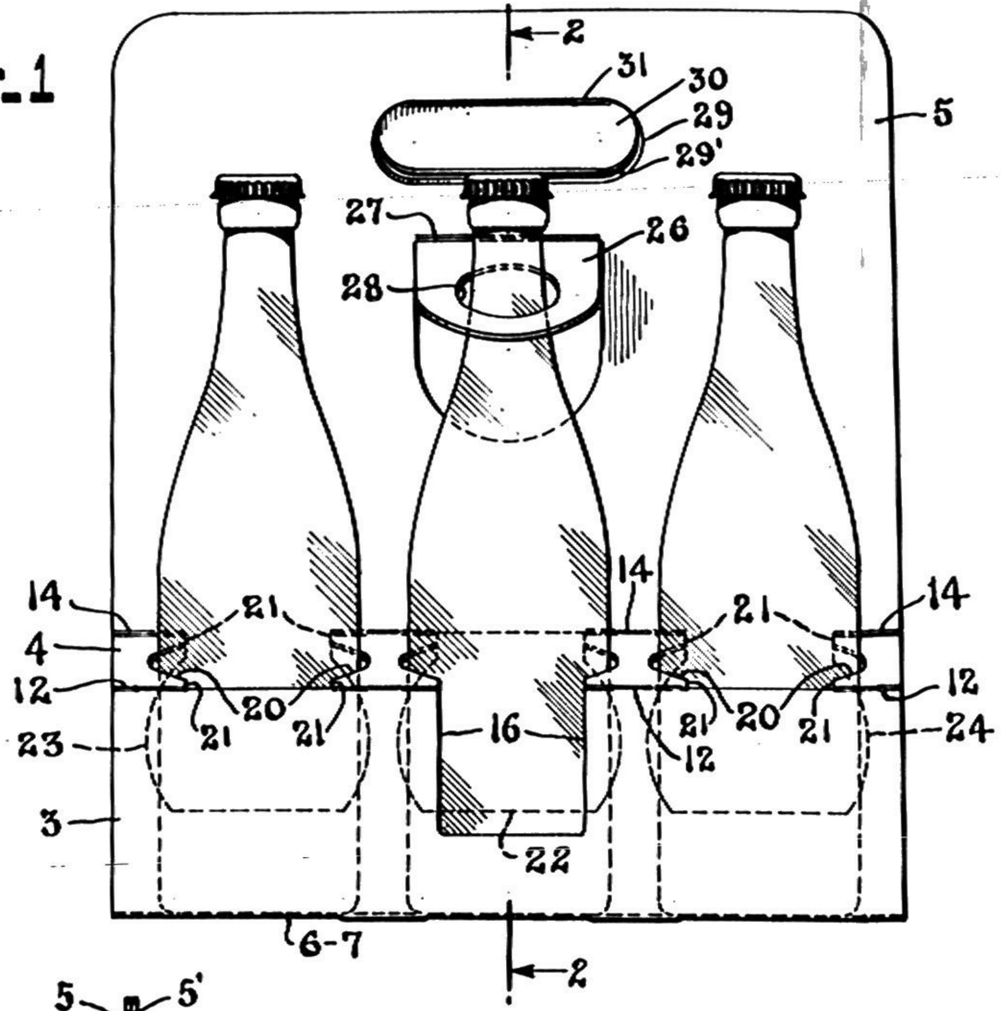
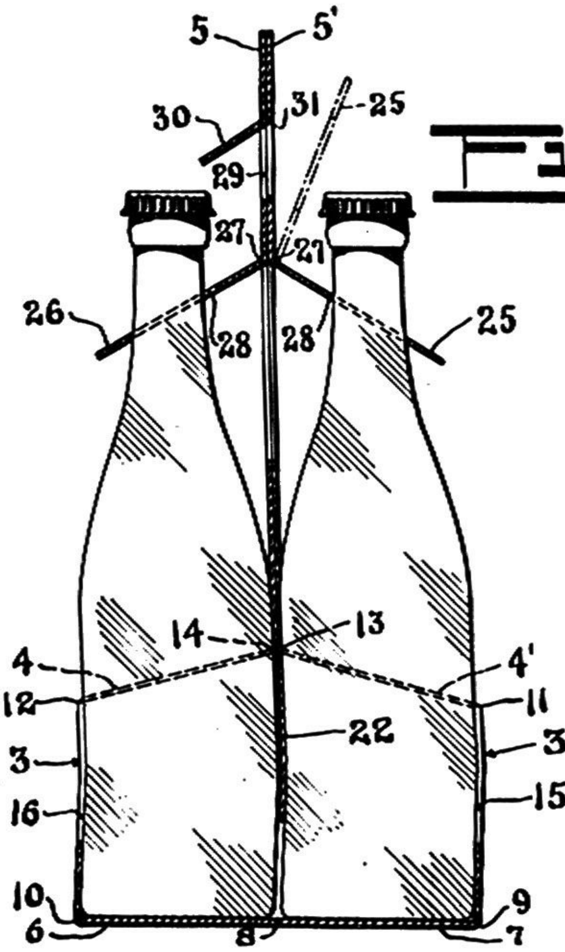


Fig. 2



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COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES

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Fig. 4

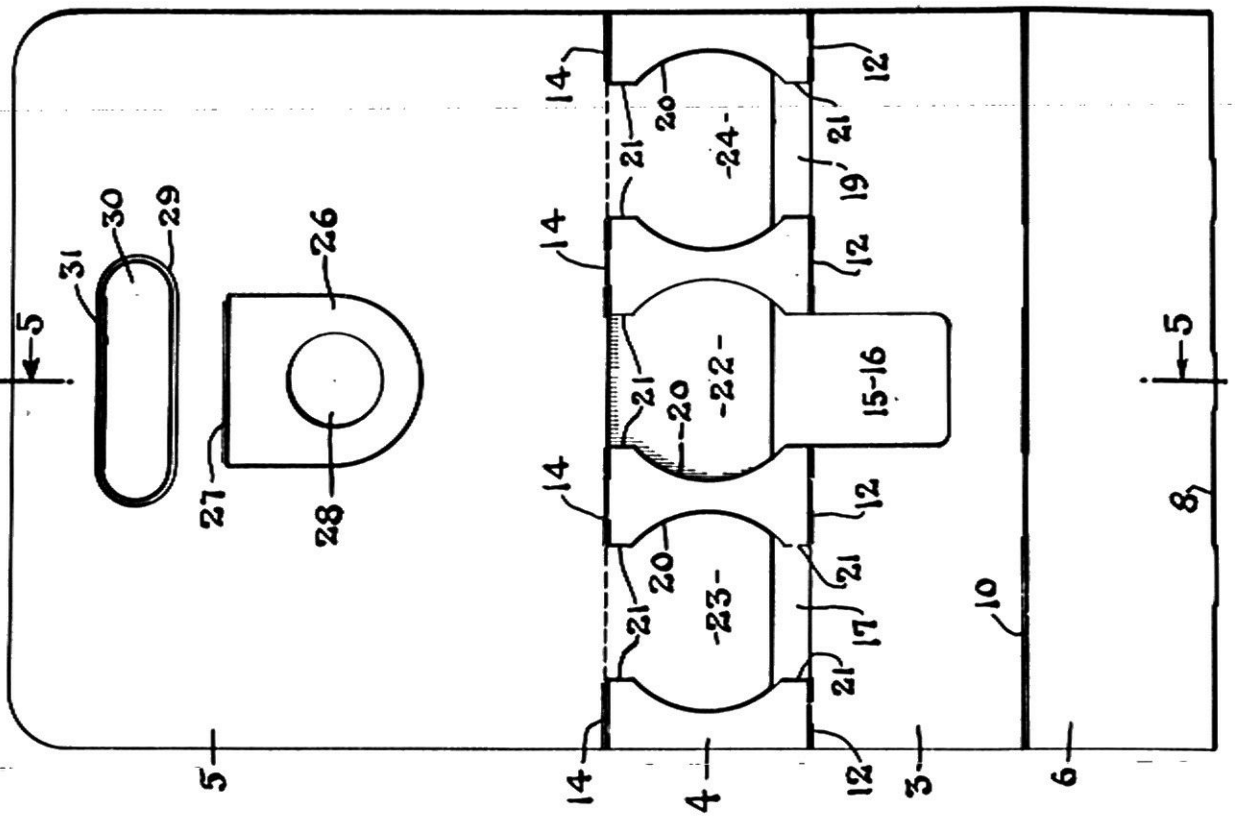


Fig. 5

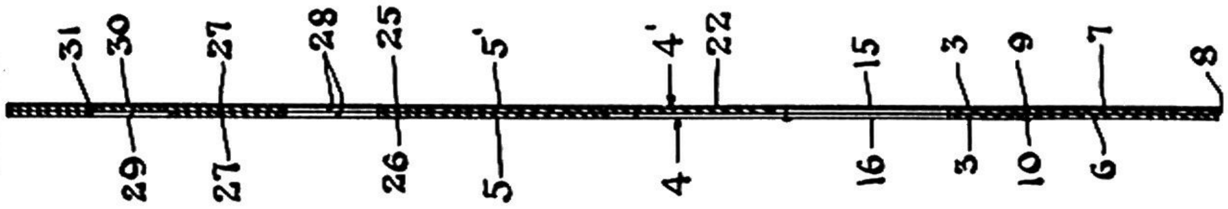
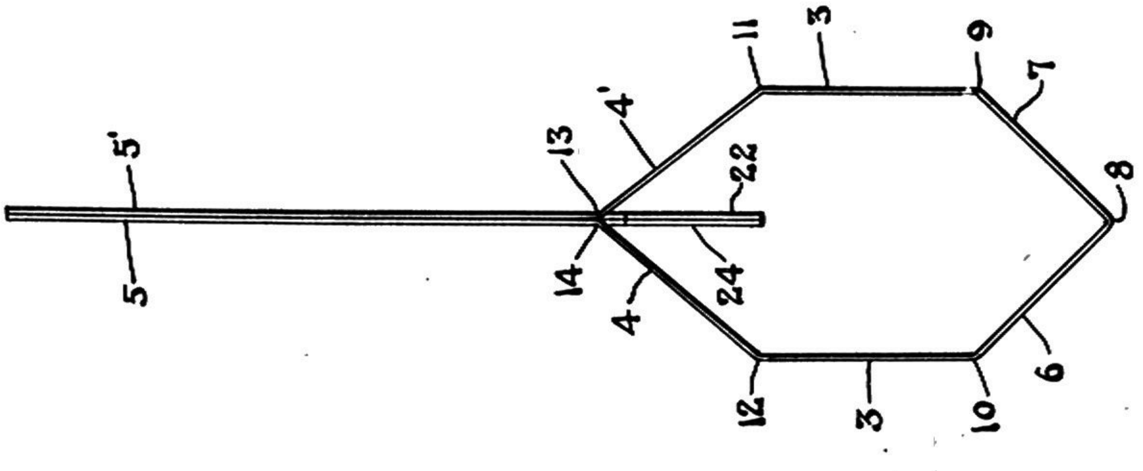


Fig. 3



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COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES

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FIG-6

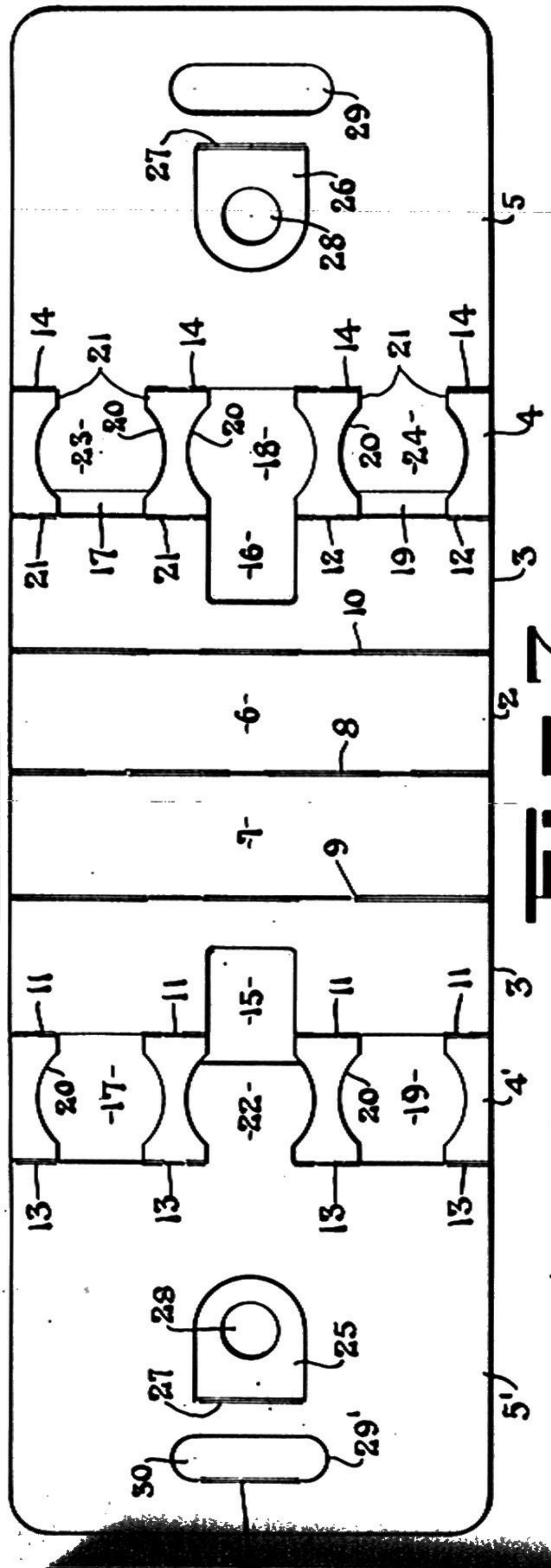
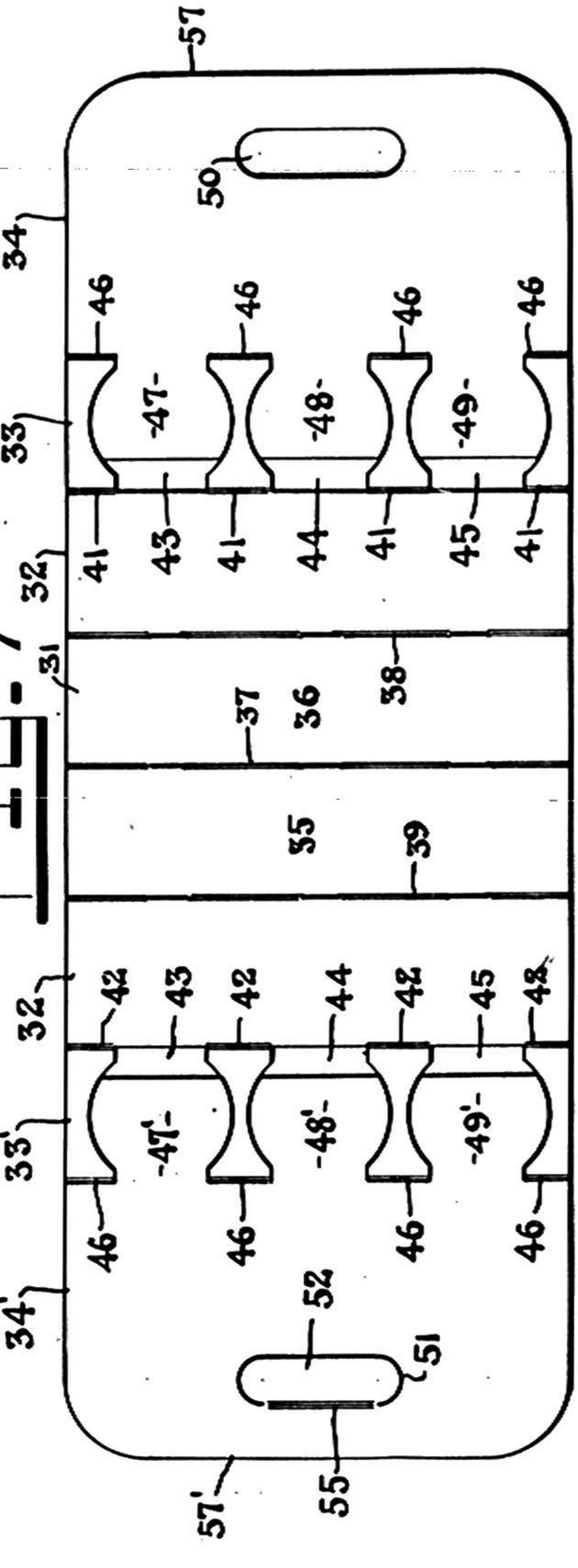


FIG-7



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COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES

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Fig. 8

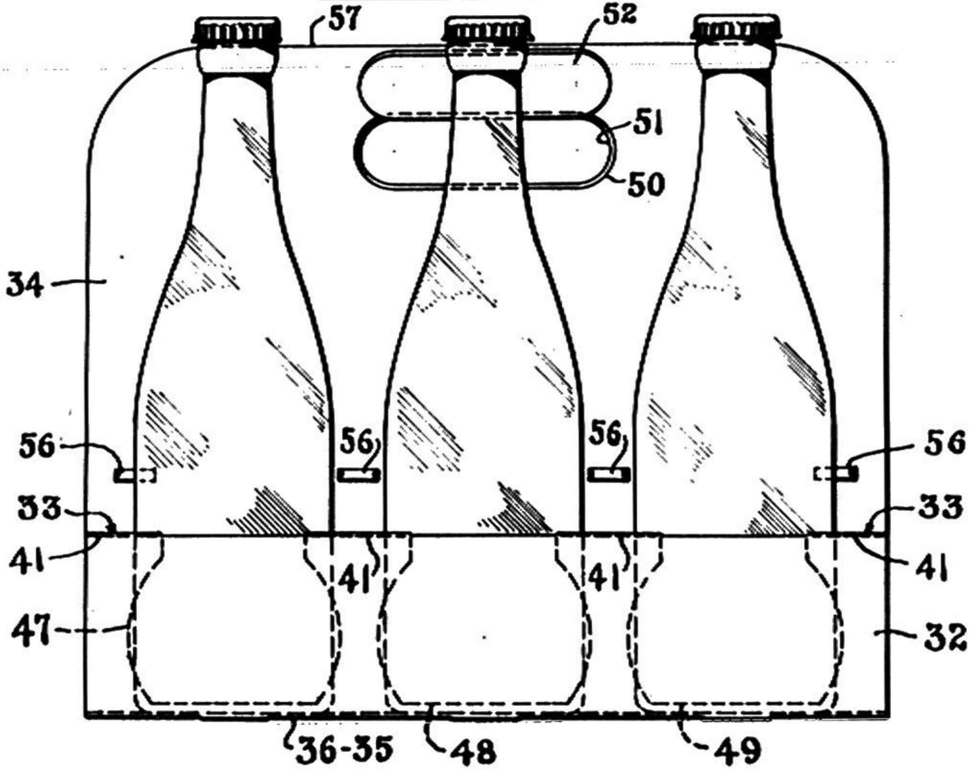
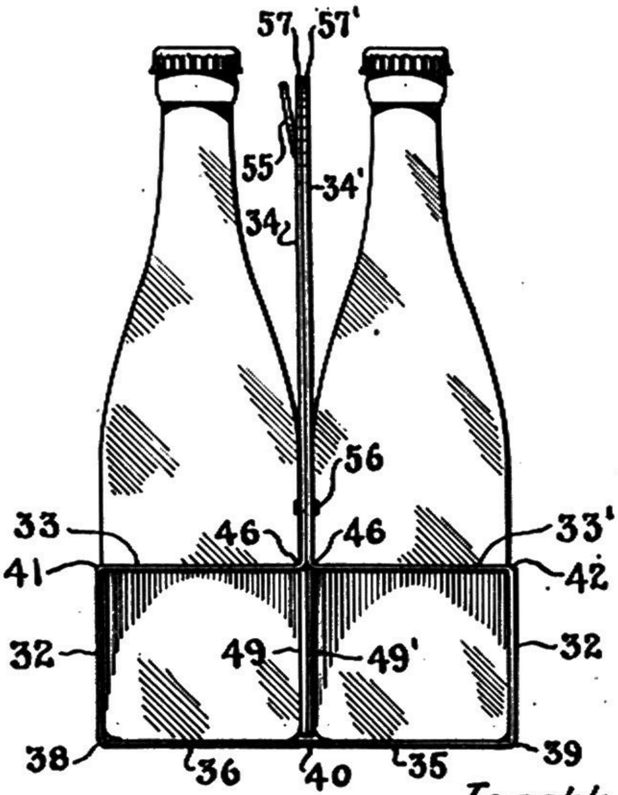


Fig. 9



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2,296,937

COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES

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Application May 17, 1939, Serial No. 274,089

2 Claims. (Cl. 224—45)

This invention relates to a collapsible carrier carton for bottles which is adapted to be formed into a carton capable of carrying or displaying a plurality of bottles containing soft drinks or other bottled goods, or to be used as a container for transporting or shipping such bottles, and which may be collapsed from its erected condition into a flat state when not being used for carrying bottles or for displaying or transporting the same.

One of the objects of the invention is to improve upon the constructions which have heretofore been employed in connection with collapsible bottle carriers of a similar type.

A further object of the invention is to provide a collapsible bottle carrier construction which, when it is in its erected position, will effectively maintain a plurality of bottles therein so that they may easily and safely be transported from place to place, and which at the same time can be utilized as an effective display carton for said bottles when it is not being used as a carrier.

A further object of the invention is to provide a collapsible bottle carrier construction which is so made that when it is in its erected condition and when bottled goods are positioned therein, a number of the carriers filled with said bottles may be stacked one upon the other either for display purposes or for storage or shipment.

A further object of the invention is to provide a bottle carrier construction made from one piece of cardboard material and which may be erected to form a bottle carrier or display carton or collapsed into a flat state when it is not being used for bottle carrying or bottle display purposes.

A further object of the invention is to provide a novel construction and arrangement of the bottle spacing elements in a collapsible carrier carton by means of which the bottles carried therein may be maintained spaced from each other and protected from jars that might occur during the transport of the carriers.

A further object of the invention is to provide a novel bottle carrier construction wherein the openings in the carrier through which the bottles extend are shaped in such a manner that they will exert a gripping action on the sides of the bottle and thus firmly hold the said bottles from displacement when a bottle filled carrier is being carried from place to place.

Further objects of the invention will appear more fully hereinafter.

Referring to the drawings, the invention is illustrated therein as follows:

Figure 1 is a side elevational view of a preferred form of my new bottle carrier showing the same in its erected condition and with the bottles positioned therein.

Figure 2 is a sectional view of Figure 1 taken on the line 2—2 and looking in the direction of the arrows.

Figure 3 is an end elevational view showing the bottle carrier construction in a partially open or erected condition.

Figure 4 is a side view of the carrier when it is in a folded collapsed and flat condition.

Figure 5 is a sectional view of Figure 4 taken on the line 5—5 looking in the direction of the arrows.

Figure 6 is a plan view of the blank of cardboard or other material cut and scored so that it may be formed into the carrier shown in Figure 1.

Figure 7 is a plan view of a blank of cardboard material formed so that it will provide a slightly modified form of carrier such as is illustrated in Figures 8 and 9.

Figure 8 is a side elevational view of the modified form of construction of carrier of my invention in its erected condition and showing it filled with bottles and resting on a flat surface.

Figure 9 is an end elevational view of the carrier construction shown in Figure 8.

The blank of material from which the bottle carrier carton shown in Figures 1 to 5 is formed is illustrated in Figure 6. This blank of material may be composed of cardboard or paper board or of any other suitable flat material. The cardboard is cut and scored so as to provide a bottom, sides and handle portions for the carton.

In the blank illustrated in Figure 6, the bottom portion for the carrier is indicated generally at 2, the lower side walls of the carrier are indicated at 3, intermediate side walls are indicated at 4 and 4', and the upper or handle sections of the carrier are shown at 5 and 5'.

The bottom portion 2 of the carrier carton includes two sections 6 and 7 which are hingedly connected together along fold line or hinge connection 8. This fold line may be formed in any suitable manner.

The two lower side walls 3 of the carrier are hingedly connected to the bottom sections 6 and 7 along the fold lines or hinge connections 9 and 10. These lower side wall sections are of such height when the carrier is in its erected condition that they will enclose the lower portions of the bottles that may be carried or displayed in the carrier. The central portions of the side walls 3 have the cut out portions 15 and 16 which are intended to more fully display the center bottles in the carrier when said carrier is in its erected condition and is being used for display purposes.

The two intermediate side wall sections of the carrier carton indicated at 4 and 4′ are hingedly connected at their lower edges to the upper edges of the lower side walls by means of the fold lines or hinge connections 11 and 12. The intermediate side wall sections are formed with the openings 17, 18 and 19 therein which are adapted to receive the bodies of the bottles to be carried or displayed by the carrier when it is in its erected condition. The openings are formed with a circular shaped edge portion 20 adapted to encircle the bodies of the bottles when they are positioned in the carrier carton. The said circular shaped openings are positioned centrally of the intermediate side wall sections and are spaced from the lower side walls and the upper handle sections by the flange portions 21.

The upper or handle sections 5 and 5′ of the carrier are hingedly connected to the intermediate side wall sections 4 and 4′ at their lower portions by means of the fold lines or hinged connections 13 and 14. The upper handle section 5′ at its lower end includes a bottle spacing flap 22 which is formed as a partially cut out portion from the intermediate side wall section 4′. The upper handle section 5, at its lower end, includes the bottle spacing flaps 23 and 24 which are formed as partially cut out portions from the intermediate side wall section 4. These flaps are adapted to extend downwardly between the rows of bottles when the carrier is in the erected condition and to space said rows of bottles from each other and also to act as a cushion against jars imparted to the bottles during transport of the carrier carton.

The upper handle sections 5 and 5′ are also provided with the flaps 25 and 26 which are formed as cut out portions of said handle sections. The flaps 25 and 26 are hingedly connected to the handle sections along the fold lines 27 and are provided with the circular openings 28 which are adapted to receive the necks of the center bottles carried by the carrier carton when it is in its erected and carrying condition. The handle sections 5 and 5′ are also provided with the openings 29 and 29′ which permit the insertion of the fingers for gripping the handle section of the carton carrier when bottles carried thereby are being transported from place to place. The opening 29′ in handle portion 5′ is provided with a hinged flap 30 which is formed as a partially cut out portion of the handle section 5′. This flap is adapted to be bent outwardly along the hinge line 31 to facilitate the gripping and carrying of the carton carrier.

In assembling the bottle carrier carton in its erected and bottle carrying condition the blank shown in Figure 6 is first folded along the fold lines 8, 9 and 10 to form the bottom and lower side walls af the carrier. Then the intermediate side walls are folded along the fold lines 11 and 12 and 13 and 14 so that said intermediate side walls will extend approximately at right angles to the vertically extending lower side walls 3 and also at right angles to the upper or handle sections 5 and 5′. When this is done the upper or handle sections 5 and 5′ will be brought together and the flaps 22, 23 and 24 will be caused to extend downwardly into the central portion of the interior of the carrier, as clearly shown in Figures 2 and 3. The upper or handle sections of the carrier are then secured together by glue or by the use of any suitable fastening means and so that the openings formed therein by reason of the partially cut out flaps 25 and 26 and the openings 29 which constitute the finger grip of the carrier, coincide with each other.

When the carrier is thus formed in its erected condition it can be seen that the bottles to be carried can be readily inserted therein through the openings 17, 18 and 19, and when said bottles are in position in the carrier their lower outer portions will be enclosed by the lower side walls and the two rows of bottles will be separated from each other by the downwardly extending flaps 22, 23 and 24. Also the central bottles in the carrier will have their lower portions, which usually contain the label for the bottle, exposed to view by reason of the cut out portions 15 and 16 of the lower side walls. The central bottles are also held more securely in place in the carrier by inserting the neck portions thereof through the openings 28 provided in the flaps 25 and 26.

When the carrier containing the bottles is being transported or carried the intermediate side wall sections will be pulled upwardly from their approximate right angle position and so that they will assume a plane with respect to the lower side walls which will be at a more acute angle with said lower side walls. When this occurs the edges 20 of the circular shaped openings in the intermediate side walls will be caused to firmly grip the sides of the bottles and hold them firmly against shifting in the carrier. Also the edges of the circular openings 28 in the flaps 25 and 26 will be caused to grip the neck portions of the center bottles and thereby provide an additional means for holding the center bottles from movement. Also, when the bottles are being carried in the carrier carton the spacing flaps 22, 23 and 24 will effectively keep the bottles in each row out of contact with each other and will cushion the said bottles against jars that may be imparted to them.

In the carrier carton illustrated in Figures 7, 8 and 9, a slightly modified form of construction is shown. In connection with this form of construction the blank for forming the carton is shown in Figure 7. The said blank is cut and scored so as to provide a bottom for the carton indicated generally by the numeral 31. The lower side walls are indicated at 32. The intermediate side walls are shown at 33 and 33′ and the upper handle sections at 34 and 34′.

The bottom 31 includes two sections 35 and 36, the same as in the carton illustrated in Figures 1 to 6, and said sections are hingedly connected together along the fold line or hinge connection 37.

The two lower side walls 32 are identical in construction as the side walls of the carton carrier shown in Figures 1 to 6, except that they do not have any cut out portion in the central portion thereof, and are hingedly connected to the bottom sections 35 and 36 along the fold lines or hinge connections 38 and 39.

The two intermediate side wall sections are indicated at 33 and 33′ and are hingedly connected at their lower edges to the upper edges of the lower side walls by means of the fold lines or hinge connections 41 and 42 and are formed with the circular shaped openings 43, 44 and 45 therein, which are similar in all respects to the openings 17, 18 and 19 in the carton shown in Figures 1 to 6.

The upper or handle sections indicated at 34 and 34′ are hingedly connected to the intermediate side wall sections 33 and 33' at its lower portion by means of the fold lines or hinge connections 46. The length of the handle sections is such that their upper edges will be below the tops of the bottles positioned in the carrier when the bottle filled carrier is resting upon a flat surface.

The handle section 34 is provided with the bottle spacing flaps 47, 48 and 49 which are formed as partially cut out portions from the intermediate side walls 33. The handle section 34' is provided with the bottle spacing flaps 47', 48' and 49' which are formed as partially cut out portions from the intermediate side walls 33'. These flaps are adapted to extend downwardly between the two rows of bottles when the carrier is in its erected condition and bottles are placed in the carrier, and to extend approximately to the bottom of the carrier when it is resting on a flat surface, as clearly indicated in Figures 8 and 9.

The handle section 34 is provided with a finger grip opening 50 and handle section 34' is formed with a similar opening 51 which has a partially cut out flap 52, hingedly connected to said handle section along the fold line 55. The two upper or handle sections 34 and 34' are adapted to be secured together in any well known manner either by gluing or by means of staples as indicated at 56 in Figure 8.

When the carton illustrated in Figures 7, 8 and 9 is in its erected condition as shown in Figures 8 and 9, and is filled with bottles and resting on a flat surface, the tops of the bottles will extend slightly above the top edges 57 and 57' of the handle sections. This fact enables a number of the bottle filled carrier cartons to be stacked one upon the other and the bottoms of the carrier cartons will be supported upon the tops of the bottles of the carrier carton below it. This form of construction, having the top edge of the handle sections below the tops of the bottles when the bottle filled carton is resting upon a flat surface, may also be employed in connection with the carton illustrated in Figures 1 to 6 and it will greatly facilitate the storing and shipping of a number of bottle filled cartons because said bottle filled cartons may be stacked one upon the other and thus conserve space. Also the fact that the bottles are stacked in the cardboard carriers provides a cushion for said bottles against jars and shocks which are always damaging when bottled goods are being shipped or transported. This form of construction is also of advantage when a number of bottle filled carrier cartons are being displayed on the counters or shelves of retail stores.

It will be evident that when the carrier cartons illustrated and described herein are not being used for bottle carriers or display purposes they may be collapsed from their erected condition into a flat state such as is shown in Figures 4 and 5 and a number of them may be stored or packed together in a small space.

What I claim is:

1. A collapsible bottle carrier adapted to be formed into an erected condition so as to accommodate two rows of bottles therein and having a bottom, two lower side wall sections, two intermediate side wall sections and a handle section, said lower side wall sections being hingedly connected to said bottom, said intermediate side wall sections being hingedly connected at their lower edges to the lower side wall sections and at their upper edges to the handle section so that when said carrier is in its erected condition said intermediate side walls will be disposed in a plane substantially at right angles to said lower side wall sections and to the handle section, said intermediate side wall sections having bottle receiving openings formed therein, said lower side wall sections having cut out portions therein for exposing the lower body portion of the center bottles of each row of bottles when they are in position in the carrier, said handle section having means formed by cut out portions thereof for engaging the necks of the center bottle of each row of bottles and also having a finger gripping opening formed therein.

2. A collapsible bottle carrier adapted to be formed into an erected condition so as to accommodate two rows of bottles therein and having a bottom, two lower side wall sections, two intermediate side wall sections and a handle section comprising a continuation of the intermediate side wall sections, said bottom being formed of two sections of material hingedly secured together, said lower wall sections being hingedly connected to the outer edges of said bottom, said intermediate side wall sections being hingedly connected at their lower edges to the lower side wall sections and at their upper edges to the lower portion of the handle sections, said intermediate side wall sections having a plurality of bottle receiving openings formed therein and being adapted to be disposed in a plane at substantially right angles to the lower side wall sections and the handle section, said lower side wall sections having cut out portions therein for exposing the lower body portion of the center bottles of each row of bottles when they are in position in the carrier, said handle section having bottle spacing means at its lower portion formed by cut out portions from the intermediate side wall sections and said handle section having apertured flaps cut out therefrom which are adapted to engage over the necks of the center bottle of each row of bottles in the carrier and also having a finger gripping opening formed therein.

JOSEPH L. LYONS, Jr.

Disclaimer

2,296,937.—*Joseph L. Lyons, Jr.*, Chicago, Ill. COLLAPSIBLE CARRIER AND DISPLAY CARTON FOR BOTTLES. Patent dated Sept. 29, 1942. Disclaimer filed Oct. 12, 1951, by the assignee, *Empire Box Corporation.*

Hereby enters this disclaimer to claims 1 and 2 of said patent.

[*Official Gazette November 13, 1951.*]

DECISION OF THE BOARD OF APPEALS OF THE PATENT OFFICE

Paper No. 12

Appeal No. 23,539

Hearing: May 10, 1950

Mailed
Jul 11, 1950 MF
U. S. Patent Office
Board of Appeals

IN THE UNITED STATES PATENT OFFICE

Before the Board of Appeals

Ex Parte Samuel N. Lebold

Application for Patent filed January 18, 1950, Serial No. 139,141. Bottle Holders.

This is an appeal from the action of the Examiner finally rejecting claims 3, 4, 5, 6 and 7, all of the claims in the case.

Claim 3 is reproduced as illustrative of the subject matter on appeal:

> 3. A carrier for a plurality of like beverage bottles of predetermined girth and height, said carrier being formed of a single piece of flexible paperboard which is foldable to provide, when erected, a flexible bottom, a pair of flexible side walls connected to the bottom, a flexible, vertically extending, laterally deflectable panel midway between and terminating above said side walls, and flexible transverse partition means, said transverse partition means extending between said panel and respective side walls and subdividing the space on opposite sides of said panel into cells for in-

> dividual bottles, said panel in its fully extended upright *load suspending* position *relative to said walls, with bottles positioned in the carrier and suspended by the panel,* terminating at a level which is not above the plane of the tops of such bottles loaded in said carrier and is sufficiently low with relation to said plane as to permit vertically aligned stacking of like loaded carriers on top of said carrier without distortion of said panel, and said panel being provided with a hand hold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides of said panel.

The references relied on are:

Himes	2,273,266	Feb. 17, 1942
Lyons	2,296,937	Sept. 29, 1942

The appealed claims relate to a carrier of the type familiarly used for carrying six bottles of beverage and constructed of paperboard with a central partition that serves as a handle and with three cells on each side of the central partition, each cell of a size to hold a single bottle of beverage.

This is an application for reissue of patent No. 2,460,229, issued January 25, 1949. The claims of the original case were considered by this Board in Appeal No. 16,921. In that appeal the action of the Examiner in rejecting the claims was affirmed as to claims 9 and 10 and reversed as to claims 11 and 12. The Board was impressed with the simplicity and unobvious advantages of terminating the upper edge of the central panel below the tops of the bottles. This expedient resulted in a structure wherein several filled carriers could be stacked one on top of the other without deforming the central panel which constituted a handle. The reissue oath in the present application refers to a patent to Lyons, No. 2,296,937, which was not in the record of the original case and which shows a bottle carrier with a central panel serving as a handle and so constructed as to terminate below the top of the bottles. Patented claims 1 and 2 have been withdrawn. Claims 3 and 4 here on appeal correspond to patented claims. Claims 5, 6 and 7 are new claims which do not appear in the original patent.

All of the claims have been rejected as unpatentable over Himes taken with the Lyons patent referred to above. It was the Examiner's view that no invention was involved in shortening the central panel serving as a handle in the Himes structure in view of the structure shown in Lyons, Figs. 7, 8 and 9. Lyons describes the cartons of Figs. 7, 8 and 9 in the following paragraph taken from page 3 of the patent:

> "When the carton illustrated in Figures 7, 8 and 9 is in its erected condition as shown in Figures 8 and 9, and is filled with bottles and resting on a flat surface, the tops of the bottles will extend slightly above the top edges 57 and 57′ of the handle sections. This fact enables a number of the bottle filled carrier cartons to be stacked one upon the other and the bottoms of the carrier cartons will be supported upon the tops of the bottles of the carrier carton below it. This form of construction, having the top edge of the handle sections below the tops of the bottles when the bottle filled carton is resting upon a flat surface, may also be employed in connection with the carton illustrated in Figures 1 to 6 and it will greatly facilitate the storing and shipping of a number of bottle filled cartons because said bottle filled cartons may be stacked one upon the other and thus conserve space. Also the fact that the bottles are stacked in the cardboard carriers provides a cushion

> for said bottles against jars and shocks which are always damaging when bottled goods are being shipped or transported. This form of construction is also of advantage when a number of bottle filled carrier cartons are being displayed on the counters or shelves of retail stores."

It is clear that Lyons recognized the advantage of a handle section which terminated below the tops of the bottles in stacking the bottles. Appellant refers to certain other details of the Lyons structure which is so designed as to tend to pinch the bottles together as illustrated in Figure 2 of the patent drawings. The degree of movement of the central panel thus suggested in the Lyons patent is said by appellant to permit that central panel to extend above the plane of the bottle tops when the carrier is loaded and suspended by the handle. There is also some suggestion that the Lyons carrier is so constructed that the bottles would be loose when the loaded carrier is placed on a flat surface.

Appellant contends that the claims on appeal differ from Lyons alone and that there is no such similarity between the Lyons carrier and that described by Himes as to justify a transfer of the teachings of one to the other. It appears to us that the concept, illustrated in Lyons Figures 7, 8 and 9 and referred to in the description thereof quoted above, might be applied to any bottle carrier having a central extended panel serving as a handle. There are comments in the brief and throughout the record to the effect that this Board recognized the advantages of a central panel terminating below the tops of the bottles. The Lyons' patent was not available in the consideration of the claims in the original case. It appears to us that with the Lyons' disclosure available to the art no invention is involved in utilizing the expedient disclosed in his Figures 7, 8 and 9 with any type of bottle carrier having a central panel serving as a handle. With that view of the case, it is apparent that all of the claims on appeal must fail as each is inclusive of a structure which would result from the use of the expedient illustrated in Lyons, Figures 7, 8 and 9 with the bottle carrier otherwise disclosed in Himes. It is noted that Lyons suggests that this expedient shown in Figures 7, 8 and 9 may also be applied to the bottle carrier otherwise described and shown in Figures 1 to 6 of Lyons.

The decision of the Examiner is affirmed.

In event of appeal attention is directed to *in re Boyce*, 32 C. C. P. A. 718; 144 Fed. (2d) 896; 1944 C. D. 609, 568 O. G. 568; 63 U. S. P. Q. 80, in regard to specifically including in the appeal notice all grounds of rejection in the Examiner's Statement not expressly overruled by the Board.

/s/ E. F. Klinge,
Examiner-in-Chief,

E. W. Geniesse,
Examiner-in-Chief,

M. W. Tucker,
Examiner-in-Chief,
(Acting)

Board of Appeals.

July 11, 1950.

DECISION OF THE DISTRICT COURT

Opinion

(October 22, 1951)

The Court: (Holtzoff, *J.*) The plaintiff claims a reissue patent on cartons, or carriers, for bottles containing beverages; the cartons having a handle, the top of which is below the tops of the bottles in the carton.

Cartons, or cardboard carriers, for bottles containing beverages are old, as was indicated in *Kaliska v. Coe,* 147 F. (2d) 577. There is very little room for invention in this field.

The prior art discloses such cartons with cardboard partitions, and with a handle, the top of which reaches above the tops of the bottles. This is disclosed in the patent to Himes, No. 2,273,266, cited by the Patent Office.

The plaintiff made an improvement in that he designed a handle for the carton, the top of which would fit below the tops of the bottles in the carton. The testimony demonstrates the superiority of this design over the high-handle carton, and also shows that the new device has come into common use.

The Patent Office, however, declined to issue a patent to cover the forward step taken by the applicant, because a handle, the top of which reaches below the tops of the bottles, is disclosed in the patent to Lyons No. 2,296,937.

Admittedly, however, the Lyons structure contains a movable handle, the top of which is below the tops of the bottles when the carton is at rest, but is raised above the tops of the bottles when the carton is being carried by hand.

The step actually taken by the plaintiff is to transform the handle of the Lyons structure that goes up and down, into a handle that is permanently in the low position. The Patent Office held that there was no invention.

The Court must have in mind the recent decisions of the Supreme Court which have tended to raise the standard of patentability. There must be a flash of genius, or at least an exercise of the inventive faculty, as distinguished from the exercise of the mechanical skill of the routineer in order to justify the issuance of a patent.

In *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.,* 340 U. S. 147, 152, the Court pointed out that combination patent claims must be scrutinized with care proportioned to the difficulty and improbability of finding invention in an assembly of old elements.

As far back as 1882, the Supreme Court, in *Atlantic Works v. Brady,* 107 U. S. 192, 199, made the following eloquent statement:

> "The process of development in manufactures creates a constant demand for new appliances, which the skill of ordinary head-workmen and engineers is generally adequate to devise, and which, indeed, are the natural and proper outgrowth of such development. Each step forward prepares the way for the next, and each is usually taken by spontaneous trials and attempts in a hundred different places. To grant to a single party a monopoly of every slight advance made, except where the exercise of invention, somewhat above ordinary mechanical or engineering skill, is distinctly shown, is unjust in principle and injurious in its consequences."

And again, the Court says:

> "It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures."

Finally, it must be borne in mind that there is a presumption of correctness, which attaches to the finding of the Patent Office that invention is lacking. That is a finding of fact. Unless it is overcome by convincing evidence, the Court must sustain that finding.

In view of these considerations the Court will sustain the ruling of the Patent Office and render judgment for defendant.

FINDINGS OF FACT

(Filed November 16, 1951.)

1. This is a civil action under the provisions of Section 4915 of the Revised Statutes (35 U. S. C. sec. 63) in which the plaintiffs, Samuel N. Lebold and Morris Paper Mills, assignee of said Lebold, the inventor, seek a judgment from this Court authorizing the defendant, Commissioner of Patents, to grant a patent to plaintiffs based upon certain claims of the patent application of said Samuel N. Lebold, Serial No. 139,141 filed January 18, 1950, entitled "Bottle Holders." The claims appear in paragraph 7 of the complaint.

2. The application at bar is an application for reissue of patent No. 2,460,229, granted on January 25, 1949, to said Morris Paper Mills, on an application Serial No. 776,553, filed on September 27, 1947, by said Samuel N. Lebold and assigned to said Morris Paper Mills.

3. The specification of the reissue application is essentially the same as that of the patent, except that the second paragraph of column 8, has been omitted.

4. Patent claims 1 and 2 were omitted from the reissue application.

5. The claims at bar are patent claims 3 and 4, modified to make them more limited, and new claims 5, 6 and 7, more specific than any patent claim.

6. The specification of the reissue application at bar describes the alleged invention as a bottle holder made from a unitary flat blank of paper board or similar sheet material formed to provide partitions and walls affording a plurality of rigid bottle receiving compartments, with a handle portion as related to the height of the bottle to be accommodated in the holder that the top thereof will not be higher than the tops of the bottles at any time.

7. The patent to Himes 2,273,266, granted February 17, 1942, discloses a carton bottle holder made of cardboard with partitions extending between the handle panel and the side walls providing rigid compartments, the handle member reaching above the tops of the bottles.

8. The patent to Lyons 2,296,937 granted September 29, 1942, discloses a cardboard bottle carton having a handle the top of which is below the tops of the bottles when the carton is at rest, but is movable to a position above the tops of the bottles when the carton is being carried by hand.

9. Plaintiffs' construction provides a handle for the carton the top of which is permanently below the tops of the bottles in the carton.

10. The step actually taken by the plaintiff is to transform the handle of the Lyons structure that goes up and down into a handle that is permanently in the low position.

11. The testimony demonstrates that plaintiffs' construction is an improvement over and is superior to the high handle carton, and that the new device has come into common use.

12. Plaintiffs' claimed structure does not define invention in view of the prior art.

13. Claims 3, 4, 5, 6 and 7, define no invention in view of the prior art.

14. Claims 3, 4, 5, 6 and 7, are unpatentable in view of the prior art.

CONCLUSIONS OF LAW

1. Plaintiffs are not entitled to a reissue patent containing any of the claims (3, 4, 5, 6 and 7) set forth in paragraph 7 of the complaint.

2. The complaint should be dismissed as to all the claims.

(s) Alexander Holtzoff,
Judge.

JUDGMENT

(Filed November 16, 1951.)

This action came on to be heard at this term and thereupon upon consideration thereof, it is this 16th day of November, 1951.

Adjudged that the complaint be and it is hereby dismissed, with costs against the plaintiff.

(s) Alexander Holtzoff,
Judge.

Approved as to Form:
(s) A. Yates Dowell,
Attorney for Plaintiffs.

NOTICE OF APPEAL

(Filed December 27, 1951.)

Notice is hereby given that Samuel N. Lebold and Morris Paper Mills, plaintiffs above named, hereby appeal to the United States Court of Appeals for the District of Columbia Circuit from the final judgment entered in this action on November 16, 1951.

(s) A. Yates Dowell,
Attorney for Appellants,
Samuel N. Lebold and
Morris Paper Mills,
1158 Munsey Building,
Washington 4, D. C.

STIPULATION

(Filed January 4, 1952.)

It is hereby stipulated between the parties that Plaintiffs' Exhibit 14, now inadvertently unavailable for inclusion in the record on appeal, if included, would be a copy of an advertisement of the Empire Box Company published in 1945 in which is shown a high handle type of bottle carrier.

Samuel N. Lebold, and
Morris Paper Mills,

by A. Yates Dowell,
Attorney.

Washington, D. C.,
January 4, 1952.

John A. Marzall,

by E. L. Reynolds.

Washington, D. C.,
January 4, 1952.

DESIGNATION OF PORTIONS OF THE RECORD TO BE CONTAINED IN THE RECORD ON APPEAL

(Filed January 4, 1952.)

Appellants hereby designate, as the portions of the record to be included in the record on appeal, the following:

1. Complaint.
2. Answer.
3. Transcript of testimony and evidence as on file.
4. Plaintiffs' Exhibits Nos. 1-13, 15-17.
5. Findings of Fact and Conclusions of Law, filed November 16, 1951.

6. Final Judgment, docketed November 16, 1951.
7. Notice of Appeal, filed December 27, 1951.
8. Order, filed January 4, 1952.
9. Stipulation, filed January 4, 1952.
10. This designation.

(s) A. YATES DOWELL,
A. YATES DOWELL, ESQ.,
1158 Munsey Bldg.,
Washington, D. C.,
Attorney for Appellants.

A copy of the foregoing Designation was served on the Commissioner of Patents in the office of the Solicitor by messenger on this fourth day of January, 1952.

(s) A. YATES DOWELL,
A. YATES DOWELL.

BRIEF FOR APPELLEE

United States Court of Appeals

DISTRICT OF COLUMBIA CIRCUIT

United States Court of Appeals
For the
District of Columbia Circuit
FILED MAR 14 1952
Joseph W. Stewart
CLERK

APPEAL NO. 11302

SAMUEL N. LEBOLD AND MORRIS PAPER MILLS,
APPELLANTS

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA CIRCUIT

E. L. REYNOLDS,
Solicitor, United States Patent Office,
Attorney for Appellee.

J. SCHIMMEL,
Of Counsel.

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STATUTES

35 U.S.C. 63, Section 4915 R. S. 5
35 U.S.C. 64, Section 4916 R. S. 5

United States Court of Appeals

DISTRICT OF COLUMBIA CIRCUIT

APPEAL NO. 11302

SAMUEL N. LEBOLD AND MORRIS PAPER MILLS,
APPELLANTS

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF FOR THE COMMISSIONER OF PATENTS

INTRODUCTION

This is an appeal from the judgment (App. 24) of the United States District Court for the District of Columbia, dated November 16, 1951, dismissing appellants' complaint (App. 1-6) against appellee, the Commissioner of Patents, in an action under Section 4915 of the Revised Statutes (35 U.S.C. sec. 63), Civil Action No. 3483-50, in which appellants sought to have the District Court issue an order authorizing the appellee to grant a reissue patent containing certain claims, set forth in paragraph 7 of the complaint (App. 2-5), of the Lebold patent application, Serial No. 139,141, filed January 18, 1950, for the reissue of his patent No. 2,460,229, granted January 25, 1949, entitled "Bottle Holder". The complaint was dismissed because the claims did not define patentable invention in view of the prior art.

APPELLANTS' INVENTION

The invention described in the application at bar, which application is essentially the same as that of the Lebold patent, except that the second paragraph of column 8 has been omitted, (Finding of Fact No. 3—App. 22) pertains to a carrier or holder for a plurality of bottles or similar articles. The bottle holder is constructed from a unitary flat blank of paper board or similar sheet material formed to provide partitions and walls affording, when opened, a plurality of bottle receiving compartments, with a centrally positioned handle portion so related to the height of the bottle to be accommodated in the holder that the top of the handle will not be higher than the tops of the bottles at any time, and with a hand hold provided therein at a level to position the knuckles of the user between the bottle necks disposed on opposite sides of the handle.

THE CLAIMS

The claims at bar are patent claims 3 and 4, slightly modified to be more restricted or limited, and new claims 5, 6 and 7, which are more specific than any patent claim. Patent claims 1 and 2 were omitted from the reissue application. The claims at issue appear on pages 2 to 5, inclusive, of the joint appendix. No claims have been allowed.

It is to be noted that there was no contention made in the trial Court, and there is no contention here that any one of the claims has any limitation which differentiates it patentably from any other claim. Accordingly, it is believed to be proper to say that all the claims stand together and that there is no necessity for separate analysis of the claims.

THE PRIOR ART

The patent to Himes, 2,273,266, granted February 17, 1942, discloses a bottle carrier made from cardboard or other like material in flat folded form, and which, when opened, provides a plurality of bottle holding compartments. A rigid construction is provided with partitions extending between the handle panel or portion and the side walls, the handle panel extending above the tops of the bottles positioned therein.

The patent to Lyons, 2,296,937, granted September 29, 1942, also discloses a carrier carton for bottles made in flat form from a single unitary blank of cardboard, which, when opened, provides a plurality of compartments. In this patent, the length of the handle portion is such that the upper edge will be below the tops of the bottles when the filled carrier is resting on a flat surface. The patentee states that this fact enables a number of the bottle filled carriers to be stacked one upon the other thus conserving space when the bottled goods are being shipped or transported, providing a cushion for the bottles against jars and shocks, and providing for convenience of display on the counters and shelves of the retail merchant (page 3, column 1, lines 30-56).

SUMMARY OF ARGUMENT

1. A reissue application is subject to revision and restriction in the same manner as original applications, and a patent claim reproduced in the reissue application is subject to re-examination. There is no presumption of invention, where the prior art relied upon was not cited in the prosecution of the original application.

2. The combination of the structures of the prior art, selecting the best features of each, is lacking in that ingenuity which is the necessary attribute of invention. Given the disclosures of the prior art, no extraordinary or remarkable talent was required to combine them into a single structure. The improvement wrought thereby was not unusual or surprising consequence of the unification of the elements of the prior art. No different function was performed in the combination than out of it.

3. The commercial success relied upon by appellants as indicative of invention is of no importance and significance, because there can be no invention where, as here, the combination only unites old elements with no change in their respective uses or functions. Commercial success without invention will not make for patentability.

THE ARGUMENT

Since all the claims involved in this appeal have been refused on the same references or combination of references, all the claims may be considered as a unit.

If this combination of references is proper, all the claims are unpatentable; if the combination of references is improper, then all the claims are patentable. Therefore, the issue as to all claims may be determined best by a consideration of claim 3 (App. 2), since this claim presents in its broadest aspect the subject matter for which the patent monopoly is sought.

However, before considering the claim on its merits, it is believed to be necessary to specifically and vigorously oppose appellants' suggestion (Br-9) that they are entitled to a reissue patent because of an alleged presumption that the Lyons patent must have been considered in the prosecution of the original Lebold application, and that, since invention was found present in the Lebold construction then, by that grant of the original patent, the Patent Office, and presumably the trial Court should be estopped from making a holding of non-invention now, based upon the same reference. In the first place, it should be noted that R. S. 4916 (35 U.S.C. 64) provides that "the specifications and claims in every such case shall be subject to revision and restriction in the same manner as original applications are", and the rules of the Patent Office based thereon (Rule 90) specifically provided that an original claim, if reproduced in the reissue application, is subject to re-examination. Secondly, this Court has held that the trial Court in an action under R. S. 4915 must determine invention and patentability, and that if an issue as to patentability is raised it must be decided. *Knutson* v. *Gallsworthy,* 82 U. S. App. D. C. 304, 306; 164 F. 2d 497, this decision being based upon the decision of the Supreme Court in *Hill* v. *Wooster,* 132 U. S. 693. And thirdly, this Court in *In re Drawbaugh,* 9 App. D. C. 219, and the Court of Customs and Patent Appeals in *In re Smith,* 17 CCPA 752; 36 F. 2d 522, have unequivocally held that there is no such thing as an estoppel against the Patent Office. Clearly then, appellants' references (Br-6, 9) to prior art which is presumed to have been considered in the granting of the original patent, and reliance upon that supposed presumption as a reason for the allowance of the claims at bar in the involved reissue application is without merit. No such construction or interpretation of the patent statutes or authorities is warranted. The claims of the reissue application must be considered in the same way as those of any original application.

Now turning to claim 3 (App. 2), the structure recited therein as inventive and patentable is that of a carrier made from a single piece of flexible paperboard which can be opened to provide a bottom, a pair of side walls connected to the bottom, a vertically extending panel midway between the side walls and extending above the same, partition members between the panel and side walls subdividing the space on opposite sides of the panel into compartments for the individual bottles to be placed in the carrier, the top of the panel at all times terminating at a level which is below the tops of the bottles placed therein, and the panel being provided with a handhold at a level to position the knuckles of the user between the necks of the bottles disposed on opposite sides thereof.

So much of the carton construction as relates to the side walls and partition members to provide a fairly rigid compartmental structure for receiving the bottles is admittedly old in the Himes bottle carrier (App. 11). Further, since Himes discloses a handle panel midway between and terminating above the side walls, it is abundantly clear that the only point of novelty over Himes is the difference in the height of the handle portion. That was the essential and sole difference urged by appellants' counsel before the trial Court (App. 11).

The concept of constructing a carrier with a handle panel or portion of such height above the side walls that the upper edge thereof will be below the tops of the bottles positioned in the carrier is clearly old in the Lyons patent (p. 3, col. 1, lines 3-7). The advantage of so limiting the length of the handle section was also appreciated by the patentee, both with respect to display and transportation (p. 3, col. 1, lines 30-56). Appellants' application describes the same advantage or function (p. 1, col. 2, lines 1-10).

In the light of these prior disclosures, the tribunals of the Patent Office and the District Court held that the claimed structure does not define invention. Accordingly, the question before this Court is whether the finding of the tribunals below that there was no invention was consistent with the evidence. *Abbott v. Coe,* 71 App. D. C. 195; 109 F. 2d 449.

While conceding, as they must, that Lyons perceived the advantage of having a low handle construction to permit stacking of the filled cartons without bending of the handle portion (Br-14) appellants contend that no prior art had any conception of the advantages to be obtained by designing and constructing the blank so that the opened carton would have the handle in a lowered position permanently, that is, both when resting on a flat surface for storage or display purposes, and when carried by the user. Appellants urge that in rejecting the claims on a combination of the prior art disclosures, it is not permissible to use only a part of one for the reconstruction of the other (Br-14). There is nothing in the prior art, they say, to suggest that the handle be placed in the low position during the carrying operation and it is upon this concept that invention is predicated (Br-15).

Appellants' construction was characterized by the trial Court as an improvement (App. 20). It was recognized that the low handle carriers were superior to the high handle carrier, such as Himes; and that the former had displaced the latter in common use (App. 20).

It is submitted that the combination of the prior art structures relied upon would be obvious and involves no more than mechanical skill. The selection of desirable features from these structures, utilizing the best features of each, is only the work of a routineer and does not constitute invention. The desirability of a rigid compartmental construction, such as that of Himes, is too apparent and obvious to need further comment. The desirability of having the handle below the bottle tops when the cartons are being stacked is fully set forth in Lyons. No extraordinary insight, talent, skill or ingenuity was required to reach the conclusion that a short handle in the Himes' structure would combine the desirable features of each. No particular talent was required or exhibited, given the disclosures of these prior art patents, to integrate them into a single structure. The function or advantage of each would be present in that structure. Even though an improvement over either prior art patent results, and the trial Court found that there was an improvement, such improvement does not necessarily spell invention. The improvement must involve something more than what is obvious to persons skilled in the art to constitute invention and to entitle one to protection as such. *Pearce* v. *Mulford,* 102 U. S. 112; *Minnesota Mining & Mfg. Co.* v. *Coe,* 69 App. D. C. 256, 100 F. 2d 429. In this field particularly there appears to be a strict requirement for invention. *Kaliska* v. *Coe,* 79 U. S. App. D. C. 378; 147 F. 2d 577.

Since appellants have combined the elements found in the prior art, that combination can be patentable only if a new functional relationship arises from their combination. *Gilbert* v. *Marzall,* 87 U. S. App. D. C. 1; 182 F. 2d 389. The conjunction or concert of known elements must contribute something in addition to that already known. Only when the whole exceeds the sum of its parts is the accumulation of old devices patentable. *The Great Atlantic and Pacific Tea Co.* v. *Supermarket Equipment Corp.,* 340 U. S. 147. Here, the evidence shows clearly that an important function or advantage attributed to the low handle construction was known to the art. The elements perform no different function in the combination than they perform out of it. The mere fact that appellants may have recognized additional advantages which were inherent in the structure does not and cannot convert the obvious and non-inventive a~~r~~ct into an unobvious and inventive one. The prior art, as evidenced by Lyons, having suggested the low handle to permit stacking in display and transportation, no invention exists in carrying that suggestion over into the structure of Himes.

Appellants urge, as proof of invention, the immediate and widespread acceptance by commercial interests supplying paperboard containers, and the abandonment of the structures of the references (Br-23). While such success may be some evidence of invention in cases where there may be doubts, *Conover* v. *Coe,* 69 App. D. C. 144; 99 F. 2d 377, it is no substitute for the statutory requirements of novelty and creation. *Gilbert* v. *Marzall, supra.* Commercial success cannot supply inventive genius to a device which has none. And even when utility and commercial success are present, they are not sufficient in themselves to justify the issuance of a patent. *Morrison* v. *Coe,* 74 App. D. C. 335, 122 F. 2d 793; *Rembert* v. *Coe,* 78 U. S. App. D. C. 50, 136 F. 2d 973; *Union Metal Mfg. Co.* v. *Ooms,* 81 U. S. App. D. C. 76, 154 F. 2d 857.

All the claims here involved have been found to be unpatentable because of non-invention by two tribunals of the Patent Office and by the trial Court. Under such circumstances this Court has repeatedly held that it will not disturb the findings below unless it is very clearly shown to be in error. *Abbott* v. *Coe,* 71 App. D. C. 195, 109 F. 2d 449; *Radtke et al* v. *Coe,* 74 App. D. C. 251, 122 F. 2d 937; *Standard Oil* v. *Marzall,* — U. S. App. D. C. —, 181 F. 2d 280. In other words, where the holding below against patentability is a reasonable one based on the evidence submitted, and is not clearly erroneous, and there is no proof that the new device brought about by the combination of prior art disclosures exhibits creative ingenuity, not merely the skill of the art, this Court should affirm.

CONCLUSION

It is respectfully submitted that in the present case none of the claims at bar defines inventive and patentable subject matter; that the conclusions reached by the Patent Office tribunals and the trial Court were correct and have a rational and reasonable basis in the record; and that the decision appealed from should be affirmed.

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MARCH, 1952.

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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 11,302

United States Court of Appeals
For the
District of Columbia Circuit
FILED JUN 13 1952
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CLERK

SAMUEL N. LEBOLD and MORRIS PAPER MILLS,
Appellants,
vs.
JOHN A. MARZALL, Commissioner of Patents,
Appellee.

Appeal from the United States District Court for the District of Columbia

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PETITION FOR REHEARING

Appellants Samuel N. Lebold and Morris Paper Mills request the Court to reconsider its decision of May 29, 1952 which affirmed the judgment of the District Court.

Perhaps because of the discussion by appellants of all the aspects of the case the principal issues were not sufficiently clear. Perhaps, too, the public reaction to the Supreme Court's decision in the A & P case (*The Great Atlantic and Pacific Tea Co. v. Supermarket Equipment Corp.,* 340 U. S. 147, 95 L. Ed. 162 (1950)) has imposed an attitude hostile to patents and our patent system and has resulted in a stricter attitude toward patents. It may be well to point out that the bulk of the hostile repercussions to our patent system appear to emanate from the concurring opinion of Justices Douglas and Black in the A & P case rather than from the majority opinion.

The decisions of the Board of Appeals of the Patent Office and the District Court are contrary to the decisions of our highest court over the last hundred years and are erroneous and unreasonable in view of the evidence. The subject re-issue application clearly discloses both novelty and creative genius.

The Patent Office in deciding whether an application discloses patentable subject matter is bound by RS 4886, 35 USC 31, which reads as follows:

> Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof, or who has invented or discovered and asexually reproduced any distinct and new variety of plant, other than a tuber-propagated plant, not known or used by others in this country, before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than one year prior to his application, and not in public use or on sale in this country for more than one year prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceeding had, obtain a patent therefor. (R. S. sec. 4886; Mar. 3, 1897, ch. 391, sec. 1, 29 Stat. 692; May 23, 1930, ch. 312, sec. 1, 46 Stat. 376; Aug. 5, 1939, ch. 450, sec. 1, 53 Stat. 1212.)

The criteria set out in the above statute requires the applicant to have invented something that is new and useful, that was not known or used by others before him, and that has not been patented or described in any printed publication before his invention or more than a year prior to his application. In the case at bar the Patent Office and the lower Court have denied appellants a patent because they assert that appellants' invention is anticipated by the Patent to Lyons 2,296,937 together with the patent to Himes 2,273,266. Such assertion is wrong. In considering these two patents the lower tribunals assert, in effect, that the Lyons patent suggests the lowering of the high handle of the carrier in the Himes Patent. In the Lyons patent the bottle carrier has a movable central panel with a hand opening at its upper portion, the hand opening extending above the bottle tops for carrying but being depressible to below the bottle tops when the carrier is rested on a surface. (Finding of Fact No. 8, Appendix p. 23)

Based on the evidence these decisions are unreasonable and clearly erroneous. In order for a patent to be denied because of anticipation by a combination of two or more patents it is essential, according to fundamental Patent Law, that there be some suggestion found in the patents themselves of combining their structures in a manner to produce the anticipation. This suggestion must be found in the patents, themselves, and may not be supplied. In the case at bar, admittedly, no disclosure of the low handle structure is found in the patent to Himes. (Finding of Fact No. 7, Appendix p. 23) Thus the decisions can be sustained only if there is found within the four corners of the Lyons Patent a suggestion of providing a permannetly low handle.

There are obvious differences in structure between the carriers of the two patents. The Himes structure is a relatively rigid structure in that whether the container is full and resting on a flat surface, or being carried by its handle, all the parts remain in the same relative positions. On the contrary, in the Lyons patent the central panel member can reciprocate from a higher to a lower position.

There is no disclosure whatever of a low handle on a carrier while in use but only when the carrier is resting on a surface or supported from beneath or on its bottom. As the central member is attached to lateral supporting members these, too, reciprocate with the panel member. Lyons went to considerable effort in constructing his carrier to provide for this reciprocating feature. Lyons and the industry, up to the time of appellants' invention in the case at bar, thought that the only convenient manner of *carrying* a bottle carrier of this type was for the user's hand to grasp the central panel *above* the top of the bottles. But in order to afford a more compact device for easier stacking Lyons provided the reciprocable feature, as mentioned above.

The Lyons patent, therefore, does not suggest a bottle carrier of rigid construction in which the central panel member is permanently below the tops of the bottles. There is no basis for the Court and the Patent Office to hold that Lyons makes such a suggestion but such is controverted by the Lyons patent, itself, in which *special provision* is made to provide a central handle portion which is *always raised* when the container is *carried.*

The commercial success of appellants' carrier was brought out merely to emphasize to the Court that it has been universally accepted by the trade in place of previous carriers having a handle extending above the tops of the bottles. Even the owners of the Lyons patent are using appellants' carrier instead of the carrier shown in the Lyons patent. While it is true that mere commercial success and utility are not controlling, appellants are not relying merely on these aspects. Furthermore, appellants have not only had widespread sales but have met with universal acceptance by the trade, including competitors, who have discontinued using carriers of the types disclosed by Himes and Lyons. Is not the judgment of industry entitled to substantial weight?

Disregarding extran[illegible]eous influences, the law itself is the determining factor here. By it, patents are authorized and the Patent Office is established for the positive purpose of granting patents and not for the negative purpose of denying the same. Also, there is no basis in the law for an interpretation of the degree of invention required before the granting of a patent. If this and other courts require that an invention be revolutionary before a patent be granted, then the small man is practically eliminated from obtaining a patent while the big man, i. e. large companies with extensive equipment and personnel will be the only ones who can obtain patents. The law must be interpreted therefore to cover invention whether small or great.

That there is invention in this patent case is strengthened by the fact that the teachings in the industry were in the opposite direction. In this connection attention is directed to the case of *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U. S. 428, 55 L. Ed. 527 (1911), in which Mr. Justice McKenna stated

> "Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not. It regards a change as evidence of novelty, the acceptance and utility of change as a further evidence, even as demonstration. * * * In

> its narrow and humble form it may not excite our wonder as may the broader or pretentious form, but it has as firm a right to protection."

Accordingly it is believed entirely clear that appellants' invention includes the element of novelty. The rejection of the Patent Office and of the lower Court was based on the ground of lack of novelty over certain patents. Accordingly, these decisions should be reversed. Appellants, furthermore, believe that it was only through the exercise of creative genius that the inventor in the case at bar came to discover the added utility of a carrier construction with a permanently low handle. It required creative genius to look beyond the contemporary thinking that a low handle would be less convenient to grasp, would not provide enough space for a user's hand between the bottle tops, and would subject the hand to scratching by the bottle caps. This is evidenced by the fact that the trade has always used carriers having a high handle and has even gone to great lengths to provide this feature, as in the Lyons patent.

Accordingly, in view of the above the Patent Office and the lower Court erred in their refusal to grant appellants a patent and it is requested that the decision of the lower Court be reversed and the Patent Office be authorized to grant a patent to appellants.

Respectfully submitted,

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Of Counsel

I certify that this Petition is filed in good faith and not for the purposes of delay.

A. YATES DOWELL

A copy of this petition for re-hearing was served on the Commissioner of Patents in the Office of the Solicitor by messenger on this 13th day of June, 1952.

A. YATES DOWELL